- VOLUME F -

IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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ARTHROCARE CORPORATION, : CIVIL ACTION

Plaintiff :

vs. :

SMITH & NEPHEW, INC., :

Defendant : NO. 01-504 (SLR)

- - -

Wilmington, Delaware
Wednesday, May 7, 2003
9:32 o'clock, a.m.

- - -

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

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APPEARANCES:

MORRIS, NICHOLS, ARSHT & TUNNELL
BY: JACK B. BLUMENFELD, ESQ. and
KAREN JACOBS LOUDEN, ESQ.

-and-

Official Court Reporters

APPEARANCES (Continued):

WEIL, GOTSHAL & MANGES
BY: JARED BOBROW, ESQ.,
TIMOTHY DeMASI, ESQ. and
PERRY R. CLARK, ESQ.
(Redwood Shores, California)

Counsel for Plaintiff

FISH & RICHARDSON P.C.
BY: WILLIAM J. MARSDEN, JR., ESQ.,
KEITH A. WALTER, ESQ. and
EUGENE B. JOSWICK, ESQ.

-and-

FISH & RICHARDSON
BY: MARK J. HEBERT, ESQ.,
(Boston, Massachussetts)

-and-

FISH & RICHARSON
BY: KURTIS D. MacFERRIN, ESQ. and
KAREN I. BOYD, ESQ.
(Redwood City, California)

Counsel for Defendant

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PROCEEDINGS

(Proceedings commenced in the courtroom, beginning at 9:32 a.m., and the following occurred without the presence of the jury.)

THE COURT: All right. I understand we had an issue. We don't have that issue any more. But do we have any others before we bring the jury in?

MS. BOYD: No, your Honor.

THE COURT: All right. Terrific.

MR. BLUMENFELD: Your Honor, we don't have any issues, but Dr. Goldberg is back today. I think we've agreed on an order. He'll be resuming the stand today.

Smith & Nephew has been kind enough to agree that he can be in the courtroom while other witnesses are testifying today, which is -- I just wanted to alert your Honor to that.

THE COURT: Okay. Great. Thank you very much.

(Pause.)

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Good morning, ladies and gentlemen. We should proceed. I'm not quite sure where we are. Oh,

we have a witness on the stand.

MR. MacFERRIN: That's correct.

THE COURT: If she could come forward please, I'd appreciate it.

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DEFENDANT'S TESTIMONY
CONTINUED...

... KATE KNUDSEN, having been previously duly sworn as a witness, was examined and testified as follows ...

DIRECT EXAMINATION
CONTINUED

BY MR. MacFERRIN:

Q. Good morning, Mrs. Knudsen.

A. Good morning.

Q. You realize you're still under oath?

A. Yes.

Q. I would like to pick up where we left off yesterday and ask you about one other feature of the Saphyre design that you worked on. And that feature is a fluid supply. Does the Saphyre probe do the fluid supply?

A. No, it does not provide fluid.

Q. Does the Saphyre electrosurgical system include a

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were used in angioplasty means have the purpose and function of limiting current to each electrode. Similarly, that need was seen in arthroscopy applications, so we just used the idea because the end need was similar.

"Question: And what is that end need?

"Answer: The end need in angioplasty application is to work on the tissue inside the artery. The end need in arthroscopic application is work in the tissue of the joint. So we are working on tissues. The end need is similar, so extending the ballasting idea from angioplasty to arthroscopy seemed like the extension, the natural extension."

MR. JOHNSTON: That is all we have. Thank you very much, ladies and gentlemen.

THE COURT: All right. Ladies and gentlemen, let's take a 15-minute afternoon break and then we'll conclude with whatever testimony that counsel have.

(At this point the jury was excused for a short recess.)

THE COURT: All right. 15 minutes.

(Short recess taken.)

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(Court resumed after the recess.)

THE COURT: Can we bring our jury in?

MR. MARSDEN: I'm not sure what your preference is in admitting the exhibits outside the jury or outside the presence of the jury or in front of the jury. I moved some exhibits that Mr. Blumenfeld didn't have an opportunity to review. He has reviewed them and does not have an objection.

THE COURT: Let's bring the jury in because if we're going to finish early, this is a long day for them and we can do that at the end of the day.

MR. MARSDEN: We can do that outside the presence of the jury?

THE COURT: Yes. I don't think your reading off numbers is going to make a big impression on them.

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Mr. Marsden?

MR. MARSDEN: Thank you, your Honor.

Ladies and gentlemen of the jury, we next call Dr. Kenneth B. Taylor.

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DEFENDANT'S TESTIMONY CONTINUED

... KENNETH BOYLE TAYLOR, having been duly sworn as a witness, was examined and testified as follows ...

MR. MARSDEN: Ladies and gentlemen of the jury, Dr. Taylor is not a medical doctor, but he has a Ph.D. in biomedical engineering. We are calling him as an expert in the design and use of electrosurgical systems. He will be offering opinions on the issues of infringement and invalidity and he'll be explaining the basis for his opinions.

DIRECT EXAMINATION

BY MR. MARSDEN:

Q. Good afternoon, Dr. Taylor.

A. Good afternoon.

Q. Could you introduce yourself to the jury, please?

A. Sure. Hi. High name is Ken Taylor. Good to meet you all.

Q. Dr. Taylor, where do you live?

A. I live in Broomfield, Colorado.

Q. Are you married?

A. Yes, I am.

Q. Do you have any children?

A. I have one son.

Q. How long have you been married?

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A. I've been married 30 years.

Q. How old is your son?

A. He's 23.

Q. Do you have any experience or training in electrosurgery?

A. One might say so, yes.

Q. Have you prepared a resume that outlines your educational and work experience?

A. Yes, I have.

Q. Could I ask you to turn to DTX-418 in the binder that you have in front of you?

A. Yes.

Q. Does that show your experience or training in electrosurgery?

A. Yes, it does.

Q. Can you describe your educational background for the jury?

A. Sure. I have a B.S. in electrical engineering from the University of Connecticut. I have a Master's degree in biomedical engineering as well as a Ph.D. in biomedical engineering, also from the University of Connecticut. And I have an MBA from Rennselear Polytechnic Institute.

Q. Did you work while your were pursuing your graduate degrees?

A. Yes. Once I got my B.S. degree, I worked

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continuously.
Q. Where did you work while you were getting your graduate degrees?
A. I started working after my Bachelor's degree at St. Francis Hospital in Connecticut. I was the Manager. At some point I was the Manager of the Research Laboratory as well as a perfusionist. A perfusionist is a person that runs a heart/lung machine during open-heart surgery.
Q. Did you have any exposure to electrosurgical systems during that job at St. Francis?
A. Yes, I did. As Manager of the Research Laboratory there, we did a number of different types of animal surgery for clinical practice as well as for testing various devices and we had an old, what's known as a Bovie unit, that we used during the course of those surgeries for cutting and coagulation.
Q. Did you work at any other companies or locations while you were pursuing your graduate degrees?
A. Yes. When I left the hospital, I went to work for United Technologies, which was a company that's in East Hartford, Connecticut.
Q. Did your work involve any medical research?
A. Actually, it did. A lot of you know United Technologies is a company that makes things like elevators, air-conditioners and such. They also have

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a research center that on occasion does some philanthropic projects and I developed an automated gait analysis laboratory for Children's Hospital in Hartford during the course of my tenure at that job.
And as a matter of fact, during the course of this trial, there's been a conference, automated gait analysis, which is being partially sponsored by A. I. DuPont Hospital, which is the hospital that we consulted with after we had built the Gait Lab for the Children's Hospital.
Q. And when you say gait, is that gate like a fence or is that a different kind of gate?
A. Walking analysis. Gait Analysis Lab is designed to diagnose walking disorders, particularly in children, children with cerebral palsy and such.
Q. Have you done any teaching in the field of electrosurgery?
A. Yes, I have. I've taught courses in introduction to biomedical engineering at the University of Connecticut as well as Trinity College, Hartford Graduate Center. Those courses involve teaching by low electric surgery.
Q. Do you have any work experience in the field of electrosurgery?
A. Yes, I have. I've got a number of different job opportunities where I worked with electrosurgery.

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First off, when I worked at Pfizer, I did work at Pfizer for about three years, running a group that was involved with technology assessment as well as a group that did technical resource types of activities and sponsored research project that involved electrosurgery.
I was also a Vice President of R&D for Valleylab and developed a number of electrosurgery systems, generators, including the generator that is on the table there, Force FX and also other devices related to that. And my most recent position, we worked on -- and developed a device that incorporates an electrosurgery generator within it.
Q. Thank you.
Can you describe for the jury what Valleylab is?
A. Valley -- Valleylab is a company that basically has two product lines. One of them is electrosurgery systems and the other product line is ultrasurgical aspirators. It focuses on tissue ablation, using those types of systems.
Q. And what was your position at Valleylab?
A. I was the Vice President of Research and Development there.
Q. How long did you hold that position?
A. Five years.

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Q. During your work at Valleylab, did you have -- use or evaluate any electrosurgical devices?
A. Yes. A fair number of them. Our own products as well as competitive products.
Q. Dr. Taylor, are you a physician?
A. No, I am not.
Q. Are you a surgeon?
A. No, I'm not.
Q. In the course of your work experience, have you had an opportunity to observe electrosurgery?
A. Probably observed the use of electrosurgery in well over 3,000 operations.
Q. Do you have any understanding as to whether Dr. Goldberg is a surgeon?
A. My understanding is he's a radiologist; he's not a surgeon.
Q. Where did you work next after Valleylab?
A. I worked for a company called Medlogic Global Corporation. It's a company that -- a startup company that focused on tissue adhesives.
Q. Okay. And did you -- what was your next position where you worked with electrosurgical devices?
A. I worked most recently worked at a company called Colorado Medtech. And Colorado Medtech is a company that does outsource product developing, manufacturing.

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We basically develop products for other companies and manufacture products for other companies and during the course of my tenure there, we have worked on at least one project that incorporates electrosurgery generator.
Q. Are you still employed by Colorado Medtech?
A. No. We sold my division of the company at the end of January.
Q. By whom are you currently employed?
A. I'm employed by myself. I have a company called Taylor Medical Technology Consulting.
Q. What is the business of Taylor Medical Technology and Consulting?
A. My business is to do medical device technology planning and business development for small medical device companies.
Q. Do you have any patents or publications in the field of electrosurgery?
A. Yes, I have two patents. In electrosurgery. I have a total of five patents.
Q. And have you published in the field of electrosurgery?
A. Yes. I have a number of papers in that area.
Q. Are those publications listed in your resume?
A. Yes, they are.
MR. MARSDEN: Your Honor, I move the admission of DTX-418, Dr. Taylor's resume.

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MR. BOBROW: No objection, your Honor.
THE COURT: Thank you.
*** (Defendant's Exhibit No. 418 was received into evidence.)
BY MR. MARSDEN:
Q. When did you first become involved in this case, Dr. Taylor?
A. It was about a year ago.
Q. Do you recall how you were contacted?
A. Yes. Kurtis MacFerrin called me up and asked to meet with me.
Q. What were you asked to do?
A. He asked me to review the patents in suit, '536, the '882 and the '592 patents, to basically analyze them, to take a look at the prior art, to take a look at the devices that are in question here and to make a determination as to whether or not the devices infringe -- infringed, whether or not the patents were valid.
Q. And what did you do to determine whether or not the patents are infringed and whether the patents are valid.
A. Well, first, obviously, I read the patents several times. I read their file wrapper, so I guess what we would call file histories?
I looked at prior art publications and patents.

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I studied the devices. When I say I studied the devices, basically I received products from Smith & Nephew. That included the instruction sleeves. I -- those products included the generator.
I also looked at the design history files for the products. At least parts of them, not the whole file. And I reviewed a whole host of depositions from a variety of people, both at Smith & Nephew and ArthroCare, including the deposition for -- for Mr. Eggers, the deposition for Dr. Thapliyal, Mrs. Knudsen's deposition, Mrs. Drucker's deposition, and a long list of others.
Q. Did you review --
A. I also went to Smith & Nephew's bioscope lab and had an opportunity to use the Control RF and Saphyre and the ElectroBlade on a cadaver shoulder. That was fun. I enjoyed that.
Q. Did you also review Knudsen's deposition testimony?
A. Yes, I did.
Q. Are you being compensated for your time in this case?
A. Yes, I am.
Q. At what rate are you being compensated?
A. I am being compensated at my standard, what -- time, my standard consulting rate of $150 an hour.
Q. Have you ever served as an expert in litigation

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before?
A. No, I haven't.
Q. As a result of the study that you performed, have you reached any opinions regarding infringement and validity?
A. Yes, I have.
Q. What are those opinions?
A. My opinion is that the products, the accused products, the Saphyre, the ElectroBlade and the Control RF, do not infringe the ArthroCare patents. And also that the ArthroCare patents are invalid.
Q. Okay. Let's turn first to the issue of noninfringement and we'll take patents one at a time, if that makes sense to you.
A. That's fine.
Q. Okay. Let's start with the '536 patent, Dr. Taylor.
Can you describe for the jury what the '536 patent is about?
A. The '536 patent is what -- what I call and what we call an utility patent. It describes a product or an apparatus that is an electrosurgical system that contains or has an electrosurgical probe which has an electrically conductive fluid supply.
Those are the essential parts of it.
Q. How do you know that the system claimed in the '536

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patent includes an electrosurgical -- I'm sorry -- an electrically conductive fluid supply?
A. Well, if you go look at the actual patent itself, it pretty much states that in the claims. If you look at the figures, at least some of the figures in the patent, it pretty much states that.
And there are some other aspects that includes.
Q. Did you consider the Court's claim construction on that issue?
A. Oh, yes, I certainly did.
Q. Have you prepared any graphics to help explain to the jury how you reached your conclusions in connection with the '536 patent?
A. Yes, I have.
Q. All right.
MR. MARSDEN: Gary, could we have DDTX-406, please?
BY MR. MARSDEN:
Q. I think you answered earlier that one of the ways that you determined that an electrically conducting fluid supply was required by the claims of the '536 patent was by looking at the claims themselves?
A. Yes.
Q. Could you use this graphic to explain to the jury how you reached this conclusion?

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A. Sure. If you look at the top there, you've got an electrosurgical system, which is -- which has been highlighted, comprising, among other things, down the bottom here, an electrically conducting fluid supply, so that's in the claim. And then if you go over to Figure 1, you see that there's an IV bag (indicating). You actually have the text of the claim, it's more evident, but there's an IV bag that goes by a tube into the actual device.
Q. And there's this word comprising that you've highlighted on this slide. Does that have any special meaning in the field of patent law?
A. Yes, it does, and actually you guys explained that to me very well. Basically, it says that the system has to include these elements and it just lists the elements here.
Q. Okay.
A. It has to contain those elements.
Q. It's like including?
A. Yes. It has to include those elements.
Q. Do you have other slides that you prepared?
A. Yes.
The next, Gary, I won't call you Chris -- Gary, the next one, please.
Here's a series of four figures which show the electrically conductive fluid supply coming in from a

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number of different perspectives.
And figure -- in Figure 2A, the fluid is being supplied through the center of the device and that's shown there.
- - -
A. (Continuing) Figure 6, the fluid supply is coming in from the bottom and flowing in that direction.
Figure 7 is a different embodiment. You have the return electrode and fluid supply are one part of the probe, a separate element of the probe and the active electrode is over here. The fluid supply is being supplied through the return electrode in this secondary shaft, if you will.
- - -

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A. (Continuing) And in the case of Figure 8, the fluid supply is on the outside of the structure there.
So we've got essentially four different ways to get it there. One is through the center of the probe, one is through the bottom of the probe, if you will, one is through a separate return electrode and fluid supply and the other is on the outside of the shaft.
Q. If I could just direct your attention to Figure 7 again, why is this not a separate fluid supply -- I'm sorry. Why is this not a separate fluid supply system apart from the electrode -- electrosurgical system?
A. Well, because if you go back to the original claim, the claim requires that you have a return electrode as well as an electrically conductive fluid supply. In this particular case, the return electrode is actually separate from the active electrode shaft. But it does contain the electrically conducting fluid supply.
Q. And where exactly is the return electrode in the embodiment or the example given in Figure 7?
A. Figure 7, the return electrode is right there.
Q. Do you consider that to be part of the electrosurgical system?
A. Yes, I do.
Q. Were you just in the courtroom when the testimony

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of Dr. Thapliyal was read?
A. Yes, I was.
Q. Did you hear Dr. Thapliyal describe the differences between the '909 patent and the '536 patent that we've been discussing?
A. Yes, I did.
Q. Do you recall what the difference was that he called out in his testimony?
A. I believe the difference was that the '506 patent includes an electrically conductive fluid supply.
Q. You said you considered the Court's claim construction in evaluating infringement of the '536 patent; is that correct?
A. That's correct.
MR. MARSDEN: Could we put up the Court's claim construction, PTX-365 and go to Page 14, please?
BY MR. MARSDEN:
Q. Dr. Taylor, did you use this claim construction in reaching your conclusions of the no infringement of the --
A. Yes.
Q. Would this definition help you in reaching that?
A. Yes.
Q. How did it assist you?
A. Well, as shown there, the term system shall be

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construed to mean an assemblage or combination of things or parts forming an unitary whole, so therefore it means that all the things that are in that system or that Claim 1 have to be present in the electrosurgical system in order for it to be consistent with the claim.
Q. Okay. Now, there are particular claims of the '536 patent that have been asserted against the products that Smith & Nephew makes; correct?
A. Correct.
Q. Have you formed an opinion as to whether the Smith & Nephew Saphyre infringes Claims 46, 47 and 56 of the 536 patent?
A. Yes, I have.
Q. What is your opinion?
A. My opinion is they do not -- those products do not infringe those claims.
Q. Why not?
A. Well, I did an analysis of the claims, those three claims, and in order to do an analysis of those claims, you have to go back to the independent claim those claims reference, which is Claim 45.
Q. Did you analyze the products to determine whether they had a -- a -- an electrically conductive fluid supply?
A. Yes, I did. And they do not.

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Q. Can you tell the jury how you do an infringement analysis when evaluating a patent claim?
A. Essentially, what you do is you look at all the elements of the claims to determine whether or not the product that you are evaluating contains all the elements of those claims. And that's what I did.
Q. And what happens if one of the elements is missing?
A. If one of the elements is missing, this is like baseball. We have to have a batting average of a thousand in order to win. If one of the elements is missing, then the product does not infringe.
Q. Okay. Do you have a slide to help describe for the jury the particular claims that are asserted in the '536 patent?
A. Yes, I do.
MR. MARSDEN: Gary, could we call up DDTX-409, please?
BY MR. MARSDEN:
Q. And, Dr. Taylor, which claims are asserted against the Smith & Nephew products?
A. Claims 46, 47 and 56, as shown on the right-hand column there.
Q. Are those claims independent claims or dependent claims?
A. Those are dependent claims.

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Q. Can you describe for the jury what the difference is between an independent claim and a dependent claim?
A. Sure. A dependent claim depends upon another claim in order for it to be active. If you take a look at Claim 46, for example, it says an electrosurgical system as in Claim 45. If you look at Claim 47, it says an electrosurgical system as in Claim 46. Therefore, it depends on Claim 46.
If you look at 56, it says the electrosurgical system of Claim 45. Therefore, it depends on Claim 45.
Q. What does that mean in practical terms in terms of how you evaluate whether there's infringement?
A. What it means is, practically speaking, you have to take a look first at Claim 45 to see whether or not the product contains all the elements and infringes Claim 45. If it doesn't infringe Claim 45, then it can't infringe, in this case, 46 or 56, and also 47 due to the fact that 47 is dependent on 46.
Q. So that means that you had to look at Claim 45 even though Claim 45 is not asserted against these products; correct?
A. That's correct.
Q. Are all of the elements of independent Claim 45 found in the accused Smith & Nephew products?
A. No, they're not. They're missing -- okay. The

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product is missing, electrically conducting fluid supply.
Q. Have you prepared any slides to assist you in illustrating that t the jury?
A. Yes, I have.
MR. MARSDEN: Gary, could we pull up DDTX-408, please?
BY MR. MARSDEN:
Q. Can you use this slide, Dr. Taylor, to explain your opinion?
A. Yes.
As you see on the right-hand side, there's the claim, Claim 45, the independent Claim 45. Then on the left-hand side, what I'm showing is what the claim system must include. And as I mentioned previously, the claim, the products, the Saphyre, the Control RF and the ElectroBlade, do not have an electrically conducting fluid supply. And since all of the '536 claims require or are dependent upon, if you will, Claim 45, which requires an electrically conducting fluid supply, therefore none of those products infringe.
Q. And did you look at the Smith & Nephew products and how they are used in determining whether or not there was an electrically conducting fluid supply as claimed in the '536 patent?
A. Yes, I did.

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Q. Have you prepared another slide to demonstrate that?
A. Yes.
MR. MARSDEN: Could we call up DDTX-410, please, Gary?
BY MR. MARSDEN:
Q. Can you use this slide to describe to the jury your opinion that the '536 patent does not infringe?
A. Yes. This overhead shows the various components, actually that Mr. Sparks was demonstrating yesterday, but what you have here is on the left-hand side, more or less, you've got the fluid supply, electrically conductive fluid supply, which is an IV bag going through the fluid system, eventually ending up in a cannula that goes into the patient.
You've got a light source that powers the -- the arthroscope and eventually the image of the arthroscope is shown on a TV monitor.
And then you have the RF generator and whichever Smith & Nephew probe we're talking about, which goes into a separate port. Therefore, when you take a look at this overall arthroscopy sweet system, the electrically conducting fluid supply is separate from the RF probes.
Q. Where is the electrosurgery system in this figure?
A. The electrosurgery system is the RF generator and

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the probe (indicating).
Q. So essentially the right-hand side?
A. The right-hand side. That's correct.
Q. And where is the electrically conducting fluid supply system?
A. The electrically conducting fluid supply is this IV bag, fluid management system, the box there, and the tube that's going into the cannula.
Q. Now, I think you may have used the expression an arthroscopy suite or system in describing what you've drawn here in this figure.
Explain how, is the '536 patent directed towards an arthroscopy system?
A. No.
Q. What is the claim term that the Judge has construed? I'm sorry. What is the term that you were considering in determining infringement of the '536 patent?
A. An electrosurgical system.
Q. An electrosurgical system -- can it be part of a larger arthroscopy system?
A. It's can be part of one, yes.
- - -
Q. Were you here when Dr. Choti testified earlier this week?
A. Yes, I was.

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Q. Is Dr. Choti a surgeon?
A. Yes, he is.
Q. Do you recall whether Dr. Choti opined on the infringement of the '536 patent?
A. Yes.
- - -
Q. And what do you recall that Dr. Choti's opinion was?
A. He agreed with me.
MR. BOBROW: Your Honor, I object. It's beyond the scope of his report, what Dr. Choti did and said, what he opined on, et cetera is beyond the scope.
THE COURT: Is this what was presented here in court or presented through reports?
MR. MARSDEN: It was simply the testimony that was given from the stand by Dr. Choti, your Honor, and we're not going to go any further with it.
THE COURT: I will allow it.
BY MR. MARSDEN:
Q. Thank you, Dr. Taylor.
I'd like to turn next to the '882 patent.
Can you describe for the jury what the '882 patent is all about?
A. The '882 patent is a method patent and it's basically a method for describing h w to carry out a particular process. That's what a method patent is. And it's a

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method basically for applying electrosurgical energy to a point on the body or place on the body using an electrosurgical probe. General description.
Q. I think we've put up on the screen JTX-2, which is the '882 patent. Would that assist you in providing your testimony on the '882 patent?
A. That basically describes it pretty well right there.
Q. Okay. And what we've put up on the screen is Claim 1 of the '882 patent; correct?
A. Correct.
Q. Is Claim 1 of the '882 patent asserted against the Smith & Nephew products?
A. No, it is not.
Q. Okay. Why did you look at Claim 1?
A. Can you repeat the question?
Q. Sure. Why did you look at Claim 1 if it's not one of the asserted claims?
A. Oh. It's the -- the dependent claims are asserted against these products referenced Claim 1.
Q. So this is a little bit like Claim 45 was in the '536 patent?
A. That's correct.
Q. Okay. Now, I believe Mr. Bobrow a little bit earlier was questioning a witness about whether or not the ElectroBlade has two electrodes or maybe three

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electrodes.
Do you recall that?
A. Yes, I do.
Q. And that was in connection with the '882 patent?
A. That's correct.
Q. The '882 patent, is it even asserted against the ElectroBlade products?
A. According to my understanding, it is not.
Q. Okay. What products is the '882 patent asserted against?
A. It's asserted against the Saphyre and the Control RF.
Q. What claims are asserted against the Saphyre?
A. The Saphyre has Claim 13, 17 and 54.
Q. And how about -- is it also asserted against Control RF?
A. Yes. And Control RF, it's only 17 and 54.
Q. Are those asserted claims independent claims or dependent claims?
A. Those are dependent claims.
Q. And how do you know that?
A. If you actually show me the claim, I can show you. But they're -- all three of them are dependent upon Claim 1.
MR. MARSDEN: Gary, can we go to the page

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where we have Claims 13 and 17?
BY MR. MARSDEN:
Q. How do you know that claim 13 is a dependent claim?
A. If you look at the claim language here, it starts off as similar to what was happening in the prior patent. The method of Claim 1.
Q. All right. And how about Claim 17?
A. Similarly starts off as the method of Claim 1.
Q. And, finally, Claim 54.
A. Also the method of Claim 1.
Q. So how do you determine whether any of these dependent claims is infringed?
A. You have to go back and take a hard look at Claim 1.
Q. Okay. Now, turning back to Claim 1, you've heard some testimony, at least some reference during the course of this trial to a certificate of correction.
A. That's correct.
Q. And is it your understanding that that dispute relates to Claim 1 of the '882 patent?
A. Yes.
Q. Do you have an understanding of how many electrodes Claim 1 required when it was allowed and published by the Patent Office?
A. As originally published, it had four electrodes.
Q. And do you understand that there has been a

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certificate of correction filed that would reduce that number of electrodes to two?
A. Yes, I do.
Q. In conducting your infringement analysis of the '882 patent, did you make any assumptions regarding the certificate of correction?
A. I made an assumption that the certificate of correction was invalid and conducted my analysis, assuming that there were four electrodes.
Q. Okay. And you understand that the issue of whether or not the certificate of correction is invalid will be something that will be decided by the Court or the jury in this case?
A. Yes, I understand.
Q. But for purposes of your infringement analysis you assumed that it was invalid and that the claim, therefore, required four electrodes as originally published?
A. That's correct.
Q. And have you -- with that assumption, have you formed an opinion as to whether the Saphyre product infringes Claims 13, 17 and 54 of the '882 patent?
A. Yes, I have.
Q. What is that opinion?
A. It does not infringe.
Q. Why not?

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A. It doesn't infringe because it doesn't have four electrodes.
Q. How many electrodes does it have?
A. It has two.
Q. Again, using the same assumption about the certificate of correction, have you reached a conclusion as to whether the Control RF product infringes Claims 17 and 54 of the '882 patent?
A. Yes, I have.
Q. What is that opinion?
A. That it does not infringe.
Q. Why not?
A. It only has two electrodes instead of the four required by the patent, or the claim.
Q. Okay. I think we're ready to move on to the '592 patent.
A. All right.
Q. Can you describe briefly for the jury what the '592 patent is about?
A. Once again, the -- the '592 patent is a method patent. It's a -- basically, a patent that describes the process for doing something. And it's a method patents applying electrical energy to a target site on the body while you're spacing away or not allowing the contact, the return electrode to the body.

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Q. I'm sorry. Before I launch into the '592, I did want to ask you one other question about the '882. Does Dr. Goldberg dispute that the Saphyre and the Control RF have only two electrodes?
A. I don't believe so, no.
Q. So that your real dispute over the '882 patent in infringement is over whether or not the certificate of correction is valid or not?
A. That's correct.
Q. And if it is valid, then it would require only two; is that right?
A. Yes. However, there is, I think there's an issue in that. If it only has two, then there would be a lot of other products that infringe.
Q. Okay. Well, we'll talk about that when we get to the invalidity portion of the case.
A. Okay.
Q. Probably tomorrow, at the pace we're going.
Let's turn back now to the '592 patent.
Have you prepared a slide to assist you in explaining to the jury the opinions you've reached on the '592 patent?
A. Yes, I have.
MR. MARSDEN: Could we call up DDTX-450, please?

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BY MR. MARSDEN:
Q. Can you tell the jury which claims of the '592 patent are asserted against the Smith & Nephew products?
A. Well, there are two sets of claims. One set is shown here on the right, right-hand side, which are Claims 3, 4, 11 and 21. And as shown here, they're all dependent on Claim 1.
Q. Okay. Now, in this case, has ArthroCare also asserted the independent Claim 1?
A. I don't believe so.
Q. All right.
A. I could be wrong. I have to admit, there have been so many claim changes during the course of this particular case that it's hard to keep track.
Q. Okay. In any event, as you know from the testimony on the '882 and the '536, you need to look at Claim 1 in any event; correct?
A. Right. You do.
Q. All right. And have you reviewed Claim 1 and the dependent claims? First of all, can you tell the jury again how you know Claims 3, 4, 11 and 21 are dependent claims?
A. Once again, they start off with the method of Claim 1 in both Claims 3, 4, 11 and 21.
Q. And how did you go about analyzing whether Smith & Nephew's products infringed any of these asserted claims?

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A. Once again, I started off with the independent claim and looked at whether or not the Smith & Nephew products meet all of the elements of the independent Claim 1 and it does not or they do not.
Q. What element did they not meet?
A. They do not meet the highlighted element, which is positioning a return electrode within the electrically conducting fluid such that the return electrode is not in contact with the body structure.
Q. Did you also consider the Court's claim construction in evaluating whether or not the '592 patent is infringed?
A. Yes, I did.
MR. MARSDEN: Gary, can we call up the Court's claim construction, please, and specifically the Court's claim construction of these terms. And that's PTX-675 at Paragraph 4, I believe.
BY MR. MARSDEN:
Q. Did you use the Court's definition as set forth here in PTX-975 in determining whether or not the accused products infringe the '592 patent?
A. Yes, I did. And basically I looked at the highlighted sentence there: Claim limitation. The return electrode is not in contact with the body structure is clear -- the return electrode is not to contact the body

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at all during the performance of the claimed method.
And my interpretation and analysis would indicate that the products in suit here do contact the body during the course of the claim method.
Q. How did you determine that?
A. Based on the video, actually, based on my own personal experience, but also on the videos, training videos that were produced to me.
Q. What do you mean by your own personal experience?
A. Well, I had the opportunity to play with, I shouldn't say play -- for an engineer, it's play. Experiments with the cadaver shoulders at Smith & Nephew and had an opportunity to use the devices in a cadaver shoulder, and it was obvious that it would be very difficult to perform these procedures without contacting, having the return electrode contact the body structures at some point during the course of the procedure.
Q. Did you also review videos that Smith & Nephew has prepared to train its sales force?
A. Yes, I did. I looked at the training videos and those training videos actually are conducted by people that know what they're doing in terms of arthroscopy. And there -- it was obvious that during the course of those training videos, that the return electrode was contacting tissue during the course of the procedure.

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Q. Now, I believe through the course of the trial we've actually seen several of those videos and I believe we've already seen videos of the Saphyre and the ElectroBlade in operation.
Do you recall that?
A. Yes, I do.
Q. But do you know whether the jury has seen a video yet of the Control RF product in operation?
A. To my knowledge, they have not.
Q. Okay. And did you consider the video or a video of the Control RF product in operation in determining whether or not there was infringement of the claims of the '592 patent?
A. Yes, I did.
Q. Okay. And do you have a clip to show the jury?
A. Yes.
Q. Okay. Was this a video that was prepared again by Smith & Nephew to train its sales force on how this product would be used?
A. Yes, it was.
Q. Okay.
MR. MARSDEN: Gary, can we play DTX-897, please?
BY MR. MARSDEN:
Q. Dr. Taylor, if you would go ahead and describe for the jury what we're seeing.
A. Okay.
(Pause.)
(Video played.)
THE WITNESS: What you can see here is the Control RF, the active electrode is somewhat buried in the tissue, but the return electrode is obviously touching -- touching tissue at various points during the procedure. Actually, it's obscured here, but -- in essence, the return electrode is contacting tissue during a large portion of the procedure, right there (indicating).
MR. MARSDEN: Could I approach, your Honor?
THE COURT: Yes, you may.
BY MR. MARSDEN:
Q. Let me hand you, Dr. Taylor, the Control RF product that was marked earlier in this case. I wonder if you could remind the jury where the return electrode is on that device (handing exhibit to the witness).
A. Sure. A little difficult to see, but the tip of my finger is the start of the return electrode and it extends up to the tip of this white structure here (indicating). So it's a fairly large electrode relative to the active electrodes, which are very tiny.
Q. Okay.
MR. MARSDEN: You can stop the video. Thank you.
MR. MARSDEN: Your Honor, I move the admission of DTX-897, the video that was just played.
MR. BOBROW: No objection.
THE COURT: All right. Thank you.
*** (Defendant's Exhibit No. 897 was received into evidence.)
BY MR. MARSDEN:
Q. Dr. Taylor, if we can go back to the claims, we talked about Claim 1 and the dependent claims that depend from Claim 1; correct?
A. Yes.
Q. Did you prepare a slide to show the other claims of the '592 that are asserted?
A. Yes, I did.
MR. MARSDEN: Could we call that up, please, Gary? Okay.
BY MR. MARSDEN:
Q. And this is headed ArthroCare also asserts Claims 23, 26, 27, 32 and 42 of the '592 patent; correct?
A. That's correct.
Q. Okay. Are these claims also asserted against the Smith & Nephew Saphyre ElectroBlade and Control RF products?
A. Yes, they are.

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Q. Can you describe to the jury how this set of claims works?
A. Once again, on the right-hand side, right column, we have Claims 26, 27, 32 and 42. As you can see, they all start off with the method of Claim 23 at the beginning of each claim. On the ther side we have Claim 23.
So it requires, in order to analyze it, that you examine whether or not the products infringe Claim 23.
Q. Have you analyzed whether the three accused products infringe Claim 23?
A. Yes, I did.
Q. And did you determine whether all of the elements that are required by Claim 23 are present in the accused devices?
A. No, they're not. The -- the accused devices do not meet the second element there, the one that's highlighted, saying spacing a return electrode away from the body structure.
Q. And did you, again, use the Court's claim construction in reaching that conclusion?
A. Yes, I did.
Q. Did you rely on the videos that we've seen here in court in reaching that conclusion?
A. Yes.
Q. And did you also rely on your own experimentation

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with the devices?
A. Yes.
Q. In summary, then, Dr. Taylor, have you formed an opinion as to whether the Saphyre, ElectroBlade and Control RF products infringe Claims 1, 3, 4, 11, 21, 23, 26, 27, 32 and 42 of the '592 patent?
A. I've reached an opinion.
Q. What is your opinion?
A. They do not infringe.
Q. Do you recall whether Dr. Choti expressed an opinion on the '592 patent with respect to infringement?
A. He agreed with me.
MR. MARSDEN: Your Honor, that concludes our presentation on noninfringement for today. It might be a logical breaking point.
THE COURT: All right. Members of the jury, we will conclude for the day.
We kept you late today. We're going to let you come in later tomorrow because we've got some business we have to take care of, so if you will report -- and I think I'm going to make it at 10:30 tomorrow morning.
In the meantime, however, you're not to discuss the case among yourselves or with anyone else. You're not to read or listen to anything touching on the case or perform any independent investigation.

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Have a safe trip home, a wonderful evening and we'll see you tomorrow m rning at 10:30.
(At this point the jury was excused for the evening recess, and the following occurred without the presence of the jury.)
THE COURT: All right. I have a plea at 4:30, so we're not going to do anything yet this afternoon. We'll meet tomorrow morning at 9:30, go over these demonstratives and the other evidentiary issues and charge. If you can hang around for just a few minutes, I will have my Clerk copy my first draft of the jury instructions so you have the evening to look over them.
Oh, we need a verdict form. Take a look at the jury instructions and then prepare a verdict form, depending on what you think about what's going on in the case at this point. All right?
Thank you.
(Court recessed at 4:23 p.m., to reconvene on Thursday, May 8, 2003, at 9:30 a.m.)
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- VOLUME G -

IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

- - -

ARTHROCARE CORPORATION, : CIVIL ACTION

Plaintiff :

vs. :

SMITH & NEPHEW, INC., :

Defendant : NO. 01-504 (SLR)

- - -

Wilmington, Delaware
Thursday, May 8, 2003
9:03 o'clock, a.m.

- - -

BEFORE: HONORABLE SUE L. ROBINSON, Chief Judge, and a jury

- - -

APPEARANCES:

MORRIS, NICHOLS, ARSHT & TUNNELL
BY: JACK B. BLUMENFELD, ESQ. and
KAREN JACOBS-LOUDEN, ESQ.

-and-

Official Court Reporters

APPEARANCES (Continued):

WEIL, GOTSHAL & MANGES
BY: JARED BOBROW, ESQ.,
TIMOTHY DeMASI, ESQ. and
PERRY R. CLARK, ESQ.
(Redwood Shores, California)

Counsel for Plaintiff

FISH & RICHARDSON P.C.
BY: WILLIAM J. MARSDEN, JR., ESQ.,
KEITH A. WALTER, ESQ. and
EUGENE B. JOSWICK, ESQ.

-and-

FISH & RICHARDSON
BY: MARK J. HEBERT, ESQ.,
(Boston, Massachussetts)

-and-

FISH & RICHARSON
BY: KURTIS D. MacFERRIN, ESQ. and
KAREN L. BOYD, ESQ.
(Redwood City, California)

Counsel for Defendant

PROCEEDINGS

(Proceedings commenced in the courtroom, beginning at 9:03 a.m., and the following occurred without the presence of the jury.)

THE COURT: All right. Generally, how I go through the jury instructions is basically page by page. I will holler out the page. If there is an objection, a correction, a typographical error, whatever, you can holler out. If I don't hear anything I will assume there is nothing to be corrected or changed or amended.

We will start with Page 2, the introduction.

Page 3, the jurors' duties.

Page 4, evidence defined.

Page 5, more evidence defined.

Page 6, consideration of evidence.

Page 7, circumstantial evidence and direct. And I have got money out there for someone who gives me a different example some day, because I am so sick of this example. Think about it.

Page 8, credibility of witnesses.

Page 9, more credibility of witnesses.

Page 10, expert witnesses.

Page 11, deposition testimony.

Page 12, number of witnesses.

Page 13, demonstrative exhibits.

Page 14, burdens of proof.

MS. BOYD: Your Honor, Smith & Nephew would like to request that the last sentence of the paragraph regarding clear and convincing evidence be deleted, this sentence read this burden remains with Smith & Nephew throughout the case, it never changes or shifts to ArthroCare.

This is in addition to the Delaware Model Instruction, and we would ask that it be deleted. In the alternative, we would ask that a parallel statement be added to the end of the preponderance of the evidence paragraph.

MS. JACOBS-LOUDEN: Your Honor, this is a correct statement of the law. We cited case law for it. It has appeared in other instructions before this Court. The modern rules, of course, haven't been amended since 1993. So it is not surprising that there would be some additions since the 1993 edition.

But it is what the law is, and we think it is a correct statement that would be helpful to the jury.

THE COURT: Well, is it not also true that your burden on infringement remains with you throughout

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I'm g ing to correct it, he didn't -- I mean he corrected it and he didn't have ordinary skill.

So I think it's unfair to have us judge it one way when it was done in another way. So without knowing the history of this, I'm not confident, regardless of what the technical standard is, I'm not sure whether it should be applied in this case, depending on the facts.

MS. JACOBS-LOUDEN: But I think what would be unfair is if Mr. Raffle would be questioned, well, wouldn't one reading this think X? Wouldn't one reading this think Y? He prosecuted the patent. He can give what information he can about the prosecution of the patent, but to start using him to make an argument about what one would understand reading this would be inappropriate.

MR. MacFERRIN: Your Honor, Mr. Raffle submitted a declaration earlier in this case about these very alleged errors saying they were clerical, typographical errors.

THE COURT: And I think everyone is agreeing that you can ask him what he did. I think the issue is whether you can say, kind of make him more than a fact witness, more of an expert witness, wouldn't one of ordinary skill in the art understand X Y and Z? That's not appropriate, I don't think.

MR. MacFERRIN: I don't think that necessarily pertains to the demonstrative issue.

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THE COURT: No, no.

MR. MacFERRIN: Just having a slide.

MS. JACOBS-LOUDEN: The demonstratives we provided do raise this issue. There were slides that say that one could think this isn't an obvious error. One could thing the claims could be changed this way.

MR. BLUMENFELD: Your Honor, the demonstratives -- and here is the first one. It's No. 411, and the heading of it is, they show a change to the claim and they say, the heading is Alleged Active Electrode Error Fails The Test, Part 2. Even if active electrode is an obvious error, it's not obvious how it should be corrected. Other changes could have been made.

MR. MacFERRIN: We agree we will not use that slide, your Honor.

MR. BLUMENFELD: If they're not going to use that, they won't be able to use the other ones that follow on it that say the same thing.

MR. MacFERRIN: Well, there is slides, your Honor, which merely shows the changes that were made to the claim by the certificate of correction.

MR. BLUMENFELD: That one, we don't have a problem if they want to use that, but then they have another slide that says here is what the legal test is. The alleged error fails the test, part one, part one

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again, part two, part three. So if they're just going to use the change, then I don't think we have an issue. But if they're going to put slides up with the prosecuting attorney, say here is the test and you failed, I don't think they should be able to do that.

THE COURT: Yes. It seems to me that in this case, both sides have missed the boat on important issues because you weren't forthcoming in the first instance and didn't let you get evidence in in the second instance, so my warning to you is you better be forthcoming because surprises, I'm not good at surprises. If you're trying to get in evidence that is inappropriate or that was not appropriately discovered, it's not going to come in and you are not going to look good in the eyes of the jury and you are not going to look good in the eyes of the Court.

So maybe you need to hash this out. There will be no argumentive demonstratives of the kind that Mr. Blumenfeld has brought to my attention. All right? That's not how we do things here.

All right. Let's take a few minutes. The jury will be here at 10:30 and I want to get started on it.

Oh, verdict form. We still need something to work from on a disk which would be helpful, and you still haven't told me when you think this might go to a jury.

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Just the best estimate. It's not --

MS. BOYD: Well, that actually relates to another issue that I wanted to raise with the Court. Assuming that we do go to the jury, the jury starts its charge at 2:30 on Friday afternoon.

THE COURT: No.

MS. BOYD: No?

THE COURT: No, it won't start at 2:30 Friday afternoon. I mean the point is, I mean the way I had given you time, it should make us be finishing up on Friday morning, so the jury gets it well before the end of the day on Friday.

MS. BOYD: Okay, your Honor.

THE COURT: Are you keeping track of your time, everybody? And you still have inequitable conduct that is included in that time?

MS. BOYD: There is, there is some confusion about how details of time are being allocated with deposition designations, but there is a running total that we have been informed of.

THE COURT: All right.

MR. BOBROW: Your Honor, do you have an estimate now of what the time is for both sides?

THE COURT: I'm sure Francesca does. Why don't you talk to her about it because the time I gave you was

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for inequitable conduct as well. And this case was supposed to be done by 3:00, everything. That means in my mind if you have an inequitable conduct case, the jury needs to get it well before 3:00. Otherwise, theoretically you don't have time left.

MS. BOYD: Mr. Blumenfeld has proposed or ArthroCare has proposed to Smith & Nephew that the inequitable conduct case be addressed while the jury is deliberating, so that would be, I guess, late Friday morning or early Friday afternoon.

Will that work with the Court's schedule?

THE COURT: Yes, as long as you are within your time. I'm not putting in extra time. What I'm doing is putting in my trial time, which is your trial time. So you need to work it out. And work out, before you put on and use your last bit of time with these witnesses that you proposed to put on, you better have a clear idea of what you want left for inequitable conduct. All right?

Okay. Thank you, counsel.

MR. BLUMENFELD: Your Honor?

THE COURT: Yes.

MR. BLUMENFELD: Just to make clear, the 16 hours we got I assume includes closing arguments.

THE COURT: Yes, it includes everything. And the more time -- I mean it doesn't include -- I have

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given you some time on this, not the evidentiary issues but the jury instruction charge conference is on my time, but all the evidentiary issues you've been having is your time. That's your trial time that you are using on that kind of discussion because you haven't been able to work it out or you haven't given the other party enough notice to work it out.

So keep that in mind when Francesca talks to you about how much time, little time you have left.

(Court recessed at 10:24 a.m.)

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(Court resumed after the recess, and the following occurred without the presence of the jury.)

THE COURT: I did want to note for the record before we started that I am going to give Smith & Nephew a half-hour because, quite frankly Mr. Hebert was much too patient with some of the plaintiff's witnesses, who did not answer questions directly and clearly. And we had to go over the same questions time and again.

So for that reason, they get another half-hour.

All right. Let's bring the jury in.

MR. MARSDEN: Thank you, your Honor. While we are bringing the jury in, can I move those five exhibits.

THE COURT: Yes.

MR. MARSDEN: PX-478, PX-672, DTX-912, DTX-121, DTX-600, and DTX-791.

THE COURT: Any objection to those exhibits?

MR. BLUMENFELD: No, your Honor.

THE COURT: Thank you.

*** (Above-referenced exhibits were received into evidence.)

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Mr. Marsden, you may proceed.

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MR. MARSDEN: Thank you, your Honor. Good morning, ladies and gentlemen of the jury.

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DEFENDANT'S TESTIMONY

CONTINUED

... KENNETH TAYLOR, having been previously duly sworn as a witness, was resumed and testified further as follows ...

DIRECT EXAMINATION

BY MR. MARSDEN:

Q. Good morning, Dr. Taylor.

A. Good morning.

Q. Dr. Taylor, before we move to the issue of invalidity, I wanted to touch on a couple of cleanup matters related to the noninfringement opinions you provided yesterday. Yesterday, I asked you whether you considered or used the Court's claim constructions in reaching your opinions on noninfringement.

Do you recall that?

A. Yes, I do.

Q. Just to clarify, when did the Court provide its claim constructions to the parties?

A. In about a month.

Q. Did you review the Court's claim constructions?

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A. Yes, I did.
Q. Did you consider them in offering the opinions you have offered here in court?
A. Yes, I have.
Q. Do you believe the opinions you have offered here in court are consistent with the Court's claim constructions?
A. Yes.
Q. Turning to another brief cleanup issue on noninfringement, yesterday, when we were discussing the '592 patent, the not touching the body patent, you discussed I believe having the opportunity to use the probes in a cadaver's shoulder?
A. Yes.
Q. I think you used the word procedure when you described that. What did you mean by procedure?
A. I meant that I was performing the method that was similar to the steps in the claim.
Q. What is the method of '592, what are those steps?
A. Summarily speaking, you position an active electrode either touching the tissue or in proximity to the tissue.
Q. That's step one?
A. That's step one. And step two is you position the return electrode, so it's not touching the tissue -- not

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touching the body, I should say. That's step two.
And step three is you apply the energy to the active electrode.
Q. How do you know that those are the three steps of the '592 method?
A. That's basically what is in the claims.
Q. Has the Court provided us any additional guidance since yesterday about the meaning of those claim terms?
A. Yes.
MR. MARSDEN: Gary, can we put up the Court's jury instruction on this?
MR. BOBROW: Your Honor, I don't believe this is your jury instruction, in the sense that I thought those were still under consideration. I don't know that it is appropriate to show that though this witness.
THE COURT: My jury instruction is going to be consistent with my memorandum opinion. So none of this should be different. If this is consistent with my memorandum opinion, then this is fine.
MR. MARSDEN: Thank you, your Honor.
Gary, if you could zoom in on Paragraph No. 3...
BY MR. MARSDEN:
Q. Dr. Taylor, I believe we discussed the first sentence of this paragraph several times during the course of the trial?

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A. That's correct.
Q. Not touching, not contacting the body at all. Do the additional sentences that appear in Paragraph 3 change your opinion regarding whether or not there is infringement of the '592 patent?
A. No, it does not. It basically strengthens my opinion.
Q. Why does it strengthen your opinion?
A. Well, I think I meant makes it abundantly clear that the claim construction doesn't have any time limitations. That's number one. That's in the second sentence, the claimed method does not contain any time limitations.
And the last sentence says that the claimed method is performed when each of the three steps has been completed. So I think that also strengthens my position.
Q. Thank you very much.
MR. MARSDEN: Ladies and gentlemen of the jury, we are now going to turn to the issue of invalidity. I will apologize in advance that we are going to be moving through this very quickly. You will have these references with you in the jury room for your deliberations. Fortunately, many of the arguments relate to pictures or figures that are in the patents. So I think you will be

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able to find them relatively easily when you are in the jury room.
But I do apologize in advance, because we have time limits and we are going to move through this material quite quickly this morning with Dr. Taylor.
BY MR. MARSDEN:
Q. Dr. Taylor, now turning to this question of invalidity of the asserted claims, do you have an opinion as to whether the asserted claims of the ArthroCare patents are invalid?
A. Yes, I do.
Q. What is your opinion?
A. My opinion is that the claims are invalid.
Q. What is the basis for your opinion?
A. The basis for my opinion is that there is prior art or prior information that was published prior to these patents that contains all the essential elements of the claims.
Q. Does that mean someone else did it first?
A. Yes. That's another way of putting it.
Q. I think we also heard the term anticipation in this trial. Is that another word for this?
A. That is another way of putting that. The prior art anticipates the claims that are asserted.
Q. How do you determine for purposes f validity

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whether someone else did it first?
A. Essentially, you -- I guess you can consider it to be an infringement analysis in reverse. Yesterday, I went through all the different elements of each of the claims, and described how the Smith & Nephew products did not infringe. In essence, what I did is an analysis in reverse, by the fact that I looked at all the different prior art to see whether or not the prior art taught the various elements of the claims that are being asserted.
Q. Did you consider what level of proof is required to prove anticipation?
A. Yes. I was looking for proof in the prior art that the prior art actually taught all the essential elements in a very highly probable, very clear and convincing manner, so it would be evident to me, someone that is skilled in the art, and evident to almost anybody that the prior art taught that essential element.
Q. You mentioned there are several references that you relied on. What are those references?
A. Actually, those references are shown right there on that board. There are six references?
If you take a look, since it is a timeline as well as a pictorial of the various references, you will see that the earliest date of the ArthroCare invention is around 1993. Then there are six references going back

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in time. Dr. Manwaring's patent, which is in 1992, the '138 patent. 1987, the Pao '499 patent. 1985, the Slager articles. 1983, the Doss '007 patent. 1983 the Roos '198 patent. And 1976 the Elsasser and Roos articles.
Q. Let's turn first to your analysis of the '536, the fluid supply patent. Can you first, maybe Ms. Prescott can assist us here. Do you have a board to discuss the '536 patent claims?
A. Yes. That is the first board on the right of the board I just referenced.
Q. With reference to that board can you remind the jury which claims are at issue in the '536 patent?
A. Yes. The claims that are at issue in the '536 patent are the dependent Claims 46, 47 and 56. As I mentioned yesterday, in order to analyze those claims, you have to first analyze the independent claim, which is Claim 45.
Q. Let's start with Claim 45, then. Have you formed an opinion as to the validity of Claim 45?
A. Yes, I have.
Q. What is that opinion?
A. My opinion is that Claim 45 is invalid.
Q. What is the basis for your opinion?
A. The basis for my opinion is that I analyzed the prior art, the four articles that are referenced there on

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the board. Typically what we are doing is showing on the left-hand side the claims, and then the articles or patents that are applied on the right-hand side of the board. In this case, it is the Elsasser and Roos article, the Roos '198 patent, the Doss '007 patent and the Pao '499 patent.
Q. Let's start with the Elsasser and Roos article then. If you could turn to DTX-59-A and 59-B in your notebook, can you identify those for the record?
A. Okay. DTX-59A is the original German publication. DTX-59B is the English translation of that publication.
MR. MARSDEN: Your Honor, I move the admission of DTX-59-A and 59-B.
MR. BOBROW: No objection.
THE COURT: Thank you.
*** (Defendant's Exhibits No. DTX-59-A and 59-B was received into evidence.)
BY MR. MARSDEN:
Q. Can you tell the jury first just generally what the Elsasser and Roos article describes and have you prepared a slide for this?
A. Yes, I have.
Gary, can I have that slide?
The Elsasser and Roos article describes a bipolar electrosurgical device for the treatment of

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prostate and bladder tissue, commonly known as the procedure of a T-U-R-P or a TURP.
Q. Now, have you performed an element-by-element comparison of the teachings of the Elsasser and Roos article to the asserted claims of the '536 patent?
A. Yes.
Q. Have you prepared any slides to assist you in illustrating to the jury what that analysis was?
A. Yes, I do. There is a series of slides.
Gary, if you can go to the next one?
Essentially what I did here, as I mentioned before, I started with the independent Claim 45. The way these things are laid out, on the left-hand side of the screen we have the claim, and we will highlight the particular element that I was analyzing for that particular slide.
On the right-hand side we will have a figure, generally some text that is in the actual article, and generally at the top of that column will be the actual location of that text.
So in this case, the element that is being analyzed is the high-frequency power supply. The article specifically mentioned we connected the cutting loop and the neutral electrode to a high frequency surgical unit. That element is satisfied.

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Q. Before you go any further, Dr. Taylor...
MR. MARSDEN: Let me just tell the jury that these slides that you are seeing are demonstrative evidence and you will not have those in the jury room. If there is any information on these slides that you think is important or want to make a note of, you might want to do it as we go you. You will have the Elsasser and Roos article, but not these slides in the jury room.
THE WITNESS: Actually, before I go through the next sequence, the resectroscope consists of four elements. There is an outer sheath which is generally where the irrigation comes in. There is a telescope. Mr. Sparks showed you an arthroscope. Basically the telescope is a longer version of that. It is an endoscope.
There is a working element which is actually used to remove the cutting electrode, so it actually uses the working element, sort of a pistol grip mechanism, you move your thumb up and down, and that moves the electrode. And the electrode is shown right there, right at the tip.
So we can go to the next overhead.
The next element there is an electrosurgical probe comprising a shaft having a proximal and distal end. That is highlighted there. The article specifically mentions using a conventional resectroscope, which is what

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I just described to you.
BY MR. MARSDEN:
Q. Just to complete the process here --
A. Katie -- I am sorry, I ignored her. She is actually doing the checkmark, so you understand that each of the elements have been identified in the article, or patent.
Q. Thank you.
A. So in this case, this element has been satisfied by this reference as part, this part of the article.
Next, please.
The next settlement is an electrode terminal disposed near the distal end. That is satisfied by the resectroscope's cutting loop.
Q. It is there?
A. Right there, right.
So that element is satisfied.
Next. A connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply. Actually, there is two connectors, the one that is shown is right there. There is another one that you can't see that would be right about there.
So that element is satisfied.
Next.
The next element is a return electrode

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electrically coupled to the electrosurgical supply. The return electrode is this little metal band here, and we have already mentioned that is coupled to the high-frequency surgical unit. So that element is satisfied.
Next.
The last element is an electrically conducting fluid supply directed at the target tissue, which allows current flow path between the return electrode and the electrode terminal. The article specifically has quotes in it that indicates that that is the case. So that element is satisfied.
Q. On Claim 45, to sum up, do you have an opinion as to whether Claim 45 of the '536 patent is anticipated by the Elsasser and Roos article?
A. Yes, I have an opinion, and it is anticipated.
Q. Can you move onto the next claim, please?
Next.
The next claim is a dependent claim, as I mentioned before. It requires that it satisfies all the elements of Claim 45. And additionally, the return electrode forms a portion of the electrosurgical shaft. And that is the case, given the text there, indicating that the neutral electrode, which is another word for return electrode, is incorporated into the end of the resectroscope shaft. So that element is satisfied.

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Q. Do you have an opinion as to whether Claim 46 of '536 patent is anticipated by the Elsasser and Roos article?
A. Yes, I do, and it is anticipated.
Q. Did you consider the Elsasser and Roos article in connection with any other claims of the '536 patent?
A. Yes. The next claim is Claim 47. Next, please.
Q. That is Claim 56; correct?
A. I am sorry. 56.
And this claim, you have to have all the elements of Claim 45, plus you have to satisfy one of the target roots, which is body locations there, including the abdominal cavity, thoracic cavity, et cetera. The resectroscope is used in resections of the prostate or bladder, which is in the abdominal cavity.
Q. Do you have an opinion as to whether Claim 56 of the '536 patent is anticipated by the Elsasser and Roos article?
A. Yes, I do. And it is.
Q. Thank you. We skipped over Claim 47. Are there other references that you discuss that anticipate Claim 47?
A. Yes, there are.
Q. I think you have said you also relied on the Roos '198 patent; is that correct?

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A. That's correct.
Q. First of all, can you turn in your book to DTX-11 and identify that, please?
A. DTX-11 is the Roos '198 patent.
MR. MARSDEN: Your Honor, I move the admission of DTX-11.
MR. BOBROW: No objection.
THE COURT: Thank you.
*** (Defendant's Exhibit No. 11 was received into evidence.)
BY MR. MARSDEN:
Q. Dr. Taylor, have you prepared a slide to tell the jury what the Roos '198 patent is about?
A. Yes, I have.
Gary? Thank you.
The Roos '198 patent basically follows up on the work that Doctors Elsasser and Roos did in their article and it's a bipolar electrosurgical device for the treatment of prostate and bladder tissue, commonly known as TURP.
Q. What does TURP stand for?
A. Transurethro resection of the prostate.
Q. Have you done an element-by-element comparison of the teachings of the Roos '198 with the claims of the '536 patent?

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A. Yes, I have.
Q. Have you prepared some slides to illustrate that?
A. Yes, I have. Gary?
Thank you.
Using the same format that we have used in prior slides, a high-frequency power supply is indicated in the patent. Column 7, Lines 5 through 7. It basically says the device is connected to a high-frequency generator, which is not shown in these figures. So that element is satisfied.
Next.
The next element is an electrosurgical probe having a shaft, a proximal and distal end. That is diagramatically shown in Figures 7 and 8. That element is satisfied.
Next. The next element is an electrode terminal disposed near the distal end. The electrical terminal is basically the cutting loop. That is described in Column 6, Lines 67 and 68 and also in these figures. So that element is satisfied.
Next.
A connector, requires a connector, coupling the shaft to the electrosurgical power supply.
And that element is satisfied by Figure 7 and the text in Column 7, Lines 1 through 5. And also in

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Claim 1, as described here in this text.
So that element is satisfied.
Next.
It requires a return electrode electrically coupled to the generator. We already described that. The return electrode, or the neutral electrode is indicated by this yellow area. So that element is satisfied.
Next.
It also requires an electrically conducting fluid supply, directed to the target site and generating current, flow path between the active and return electrode. That is diagramatically shown here in Figures 7 and 8 and also specifically called out in Claim 1, basically the last line in Claim 1. So that element is satisfied.
Q. Just to pause on this one for a moment, that language that is quoted below the drawing comes from Claim 1 of the Roos '198 patent?
A. That's correct.
Q. That is where you found support for the electrically conducted fluid limitation?
A. Yes.
Q. To sum up, on Claim 45, do you have an opinion, Dr. Taylor, as to whether Claim 45 of the '536 patent is anticipated by the Roos '198 patent?
A. Yes, I do. And it is.

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- - -
Q. Did you look at the '198 patent to see if the '536 patent is anticipated by the Roos '198 patent?
A. Yes, I did. That's indicated in the next overhead. Claims 46 is anticipated. Claim 46 requires all the elements of Claim 45. Additionally, the return electrode forms a portion of the shaft of the probe and, as I previously indicated, my Figure 7 and Figure 8, that is the case. So that element is satisfied.
Q. Do you have an opinion as to whether Claim 46 of the '536 patent is anticipated by the Roos '198 patent?
A. Yes, I do. And it is.
Q. Did you look at any other claims of the '536?
A. Yes, and the next overhead shows that. Claim 47 requires all the elements of Claim 46, which is dependent on Claim 45, and requires that you have an insulating member circumscribing the electrode. Insulating member is shown there. That is identified as 35.
And is there an overhead? The next one, Gary?
Go back. Go back. Sorry.
It also requires that return electrode is sufficiently spaced from the electrode terminal, between the return electrode and the patient's tissue. That's the case. So all the elements are satisfied.
Q. Do you have an opinion as to whether Claim 47 f

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the '536 patent is anticipated by the Roos '198 patent?
A. Yes, I do. And it is.
Q. Did you look at any other claims of the '536?
A. Yes, and I guess I already tipped my hand here. I looked at Claim 56 and Claim 56 requires all the elements of Claim 45 and, in addition, it has to have a target site at the various locations indicated -- abdominal cavity, thoracic cavity, et cetera. Once again, this device is to be used for the resection of bladder and prostate tissue, and, therefore, satisfies that element.
Q. Thank you, sir.
Do you have an opinion as to whether Claim 56 of the '536 patent is anticipated by the Roos '198 patent?
A. Yes, I do, and it is.
Q. I believe you also considered the Doss '007 in connection with the '536 patent; is that correct?
A. That's correct.
Q. Can you turn to DTX-17 in your book, please, and identify that?
A. DTX-17 is a patent, the Doss '007 patent.
MR. MARSDEN: We move the admission of DTX-17, please.
MR. BOBROW: No objection.
THE COURT: Thank you.
THE DEPUTY CLERK: So marked.

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*** (Defendant's Exhibit No. 17 was received into evidence.).
BY MR. MARSDEN:
Q. Dr. Taylor, had you prepared a graphic to describe what the Doss '007 is about?
A. Yes, I have. Thank you, Gary.
The Doss '007 patent is a bipolar electrosurgical probe which includes an integrated supply of saline for the treatment of corneal tissue.
Q. Have you done an element-by-element comparison of the teachings of the Doss '007 patent to the claims of the '536 patent?
A. Yes I have.
Q. Have you prepared slides to illustrate your opinions?
A. Yes, I have. And, once again, looking at the claims of the patent, Claim 45 requires as one of the elements a high-frequency power supply. Column 3, Lines 29 to 38, specifically mentions a high-frequency power supply.
Q. So that is element satisfied?
A. That element is satisfied, sir.
Moving to the next overhead, this element requires an electrosurgical probe, having a shaft having a proximal end and distal end. As you can see, there is a shaft, there is a distal and a proximal end. And that is described by the text, Column 5, Lines 27 to

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through 31. Therefore, that element is satisfied.
Next.
The next element is an electrode terminal disposed near the distal end. And this is the active electrode or electrical terminal. It's described by the text indicated there and is shown in the red there. So that element is satisfied.
Also, requires a connector connecting the electrode terminal to the electrosurgical power supply. The text indicated in Column 3, Lines 30 through 34, indicates that that is the case. So that element is satisfied.
Next.
Requires a return electrode electrically coupled to the electrosurgical power supply. This diagram shows the return electrode indicated highlighted in yellow. And it's specifically referenced in the text in Column 5, Lines 27 through 31. Therefore, that element is satisfied.
Next.
The last element is an electrically conducting fluid supply for generating a current flow path between the return electrode and the electrode terminal.
The blue indicates the flow of saline solution into the device. The text reference is here, Column 3, Lines 48 through 54. So that element is satisfied.

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Q. Before you leave this, so the record is clear, was this coloring in the original figures?
A. No, it was not. It was coloring that was added by me.
Q. Was that to illustrate?
A. That was basically to illustrate -- we tried to be consistent, so blue is water. I guess blue looks like water; right? So that's what we used here.
Q. Do you have an opinion, then, as to whether Claim 45 of the '536 patent is anticipated by the Doss '007 patent?
A. Yes, I do. And it is.
Q. Did you consider the Doss reference in connection with any other claims of the '536 patent?
A. Yes, and the next overhead shows that.
Basically, Claim 46, as I indicated before, requires that you have all the elements of Claim 45 and also that the return electrode forms a portion of the shaft of the electrosurgical probe. And that is indicated in Column 5, Lines 27 through 31. So that element is satisfied.
Q. Do you have an opinion as to whether Claim 46 of the '536 patent is anticipated by the Doss '007 patent?
A. Yes, I do. And it is.
Q. And did you look at any other claims of the '536?
A. Yes. The next overhead shows Claim 47 which, once

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again, requires that all the elements of Claim 46 and all the elements of Claim 45 are also satisfied. And further that you have an insulating member circumscribing the return electrode, and that insulating member is the housing here which is shown in blew.

Q. We just violating our color-coding?

A. Yes, we did. I'm wrong. Sorry.

I think the next one, next overhead shows the return electrode once again in yellow. And so the elements of this claim are also satisfied.

Q. Do you have an opinion as to whether Claim 47 of the '536 patent is anticipated by the Doss '007 patent?

A. Yes, I do. And it is.

Q. Did you look at any other claims of the '536?

A. Yes, I did.

And the next overhead. Oops.

Q. Actually, maybe that is it on Doss.

A. That may be it on Doss. I'm sorry.

Q. Sorry. Okay. You mentioned also the Paul (phonetic) or Pao '449 patent. Did you consider that in your analysis of the '536 patent?

A. Yes, I did.

Q. Can you turn to -- find the right exhibit number. I'm ahead of myself.

A. I think it's DTX-21.

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Q. Yes. DTX-21 in your notebook. Can you identify that, please?

A. Yes. This is the Pao '449 patent.

MR. MARSDEN: Move the admission of DTX-21, your Honor.

MR. BOBROW: No objection.

THE COURT: Thank you.

*** (Defendant's Exhibit No. 21 was received into evidence.)

BY MR. MARSDEN:

Q. Have you prepared a summary slide? Can you describe to the jury the Pao '449 patent?

A. Yes. The Pao '499 patent describes a bipolar electrosurgical probe with an integrated saline supply for the treatment of eyes, ears, noses and other microsurgical applications.

Q. Have you prepared or did you conduct an element-by-element comparison of the teachings of the Pao '499 patent with the claims of the '536 patent?

A. Yes, I have.

Q. Did you prepare slides to illustrate that?

A. Yes, the next one starts off the sequence. Once again, the high-frequency power supply is referenced in the Pao patent in Columns 7, Lines 35/36, basically saying connected to the output of a high-frequency

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bipolar power supply. So that element is anticipated or satisfied. Sorry.

The next element is electrosurgical probe comprising a shaft having a proximal end and a distal end. This is the distal end. I guess you consider the handle to be the proximal end and that specifically references in Column 7, Lines 6 to 9 and 13 to 30. So that element is satisfied.

The next element is an electrode terminal disposed near the distal end. That is the active electrode shown in red here and described in the text in Column 7, Lines 15 to 19. So that element is satisfied.

Next element is a connector near the proximal end of the shaft. Connector is shown in green here. Those little two pins. Referred to in the text, Column 7, Lines 13 to 19. And that is satisfied.

Next.

The return electrode is shown in yellow. It's the outer electrode. And the text reference is Column 7, Lines 13 to 19 and 25 to 37. So that element is satisfied.

And, lastly, an electrically conducting fluid supply. The fluid supply comes in through this connector and flows down the lumen of the inner electrode of the active electrode, that is described in this text reference. So that element is satisfied.

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Q. Is that also described in the text as an electrolytic irrigating fluid such as saline?

A. Yes, it is.

Q. Do you then have an opinion as to whether Claim 45 of the '536 patent is anticipated by the Pao '499 patent?

A. Yes, I have an opinion. And it is anticipated.

Q. Did you compare the Pao '499 patent teachings to any claims of the '536 patent?

A. Yes, I did. Next slide, please.

Claim 46 requires all the elements of Claim 45 along with return electrode forms a portion of the shaft. And, as I previously indicated, that is the case of the return electrode, as shown here in yellow.

Q. So did you have an opinion as to whether Claim 46 of the '536 patent is anticipated by the Pao '499 patent?

A. Yes, I have. And it is.

Q. Did you consider any other claims?

A. Yes.

Next overhead, please.

Claim 56 requires the elements of Claim 45, along with one of the body parts indicated in the list here, and this particular patent specifically mentions nasal passages and ear canals. So that element is satisfied.

Q. So do you have an opinion as to whether Claim 56 of

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the '536 patent is anticipated by the Pao '499 patent?
A. Yes, I do. And it is.
Q. I think that concludes our discussion of the '536 patent.
A. I believe so.
Q. Okay. Can we turn now --
A. I think we've done pretty well.
Q. We'll turn now to the '882 patent. And did you prepare a board for the '882 patent?
A. Yes, I did.
Q. This is the compilation of multi-electrode patent?
A. Yes.
Q. First, with reference to the board, can you remind the jury which claims you analyzed for the '882 patent?
A. Well, the asserted claims are Claims 13, 17 and 54, but they require that you further analyze or consider first Claim 1. So I basically considered four claims.
Q. Do you have any opinion as to whether the asserted claims of the '882 patent are invalid?
A. Yes, I do.
Q. What is that opinion?
A. That opinion is they're invalid.
Q. What is the basis for your opinion?
A. My basis for the opinion is there are two references, the Slager article and the Manwaring '138

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patent, that anticipates those claims.
Q. Were you here earlier this week when Dr. Manwaring testified?
A. Yes.
Q. Did you hear Dr. Manwaring'S testimony that the '138 patent discloses all the limitations of Claims 1, 13, and 54 of the '882 patent?
A. Yes, I did.
Q. Do you agree with his analysis?
A. Yes, I do.
Q. Have your made your own element-by-element analysis?
A. Yes, I have.
Q. Have you prepared slides to illustrate that?
A. Yes. And, Gary, the next sequence.
Here we have what we call a rainbow slide, and it basically shows, this is the method patent. I hope everyone realizes this is a method patent. It basically outlines the steps required to perform the method, and the first step is providing an electrode terminal, which is shown here in red, and a return electrode electrically coupled to a high-frequency voltage source. Dr. Manwaring specifically mentioned in his testimony that the return electrode is on the outside of the patient. This is monopolar electrosurgery. So that is step number one.
Step number two is positioning the active

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electrode in close proximity to the target site in the presence of an electrically conducting fluid. Electrically conducting fluid is here, the tissue is here. The active electrode has been positioned close to the target site and the last step is applying a high-frequency voltage between the electrode terminal and the return electrode in such a manner you vaporize the fluid and that you induce a spark, discharge of energy to the target site. And that is indicated here by the cross-hatched yellow. So all the elements of this have been satisfied.
Q. Did you also hear Dr. Manwaring's testimony about this element when he was here testifying earlier this week?
A. Yes, I did.
Q. Does that support your conclusion?
A. Yes, it does.
Q. Do you have an opinion of whether Claim 1 of the '882 patent is anticipated by the Manwaring '138 patent?
A. Yes, my opinion is that it is.
Q. You also mentioned I think that this is a monopolar device?
A. Right.
Q. Were you here when Mr. Eggers testified about this claim?

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A. Yes.
Q. And did you hear his testimony that this claim would cover a monopolar device?
A. Yes.
Q. Did you consider the Manwaring '138 patent in connection with any other claims of the '882 patent?
A. Yes. Can we go to the next slide?
Claim 13 requires that you practice the steps of Claim 1, but also that a portion of the energy is induced basically in the form of protons.
Dr. Manwaring basically mentioned that when you have RF sparking, which is actually referenced in the text in Column 6, Lines 50 to 63, that you generate protons as well as other photons.
Q. Do you have an opinion as to whether Claim 13 of the '882 patent is anticipated by the Manwaring '138 patent?
A. Yes, I do and it is.
Q. Did you consider any other claims of the '882 patent?
A. Yes. Next, please.
Claim 54 requires method of claims, Claim 1, and further basically suctioning fluid from the target site or having a suction lumen to be able to d that.
The text in the patent Column 7, Lines 26 to 31, indicates that there is an embodiment of his invention that does that.

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MR. MARSDEN: I'm sorry. Could you all see that, the bottom of the slide?
JUROR NO. 4: Yes.
BY MR. MARSDEN:
Q. Is that here in the text?
A. Yes.
Q. Do you have an opinion as to whether Claim 54 of the '882 patent is anticipated by the Manwaring '138 patent?
A. Yes, I do and it is.
Q. I think you indicated you also considered another reference in connection with the '882 patent; is that correct?
A. That's right. Excuse me. That's correct.
Q. Could you first turn to DTX-65 in your notebook and identify that, please?
A. DTX-65 is an article written by Slager regarding vaporization of tissue by spark.
MR. MARSDEN: Move the admission of DTX-65.
MR. BOBROW: No objection.
THE COURT: Thank you.
THE DEPUTY CLERK: So marked.
*** (Defendant's Exhibit No. 65 was received into evidence.)
BY MR. MARSDEN:
Q. Have you prepared a summary slide to described what

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the Slager article teaches?
A. Yes, I have.
Q. Gary is improvising here for us.
A. Okay. Basically, this article describes an electrosurgical probe for vaporizing arterial tissue.
Q. Have you performed an element -- thank you, Gary.
Have you performed an element-by-element analysis of the teachings of the Slager -- comparing the teachings of the Slager article to the claims of the '882 patent?
A. Yes, I have.
Q. Have you prepared some slides to illustrate your opinions?
A. Yes, I have.
MR. MARSDEN: Give Gary a second here.
THE WITNESS: Okay. Once again, the very steps for performing this, this method were outlined on the left and the first step is providing an electrode terminal, shown here, coupled to a generator. And that is shown by the diagram as well as the text here. So this element or step is satisfied.
Next one is positioning the electrode terminal in close proximity to the target site in the presence of an electrically conducting fluid. That is described in the article at Pages 1383 and 1384. Basically, the spark

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electrode with that surface area, immersed in saline. So that element is satisfied.
The next element is applying high-frequency voltage to vaporize the fluid and to induce the discharge of energy and sparking. And that is very aptly described in this particular diagram. We have the electrode, we have steam, we have spark, we've got tissue. So that element is satisfied.
BY MR. MARSDEN:
Q. I'm sorry. Before you leave that slide, do you have an opinion as to whether Claim 1 of the '882 patent is anticipated by the Slager article?
A. Yes, I do. And it is.
Gary, the next slide. Sorry.
The next claim is Claim 13. This claim requires practice, method of Claim 1 and also, you have protons. And, as I described in the prior reference, sparks generate protons and this article specifically mentions sparks jumping. I should say sparks in aqueous solution, making protons.
Q. Do you have an opinion, then, as to whether Claim 13 of the '882 patent is anticipated by the Slager article?
A. Yes, I do. And it is.
Q. Did you consider any other claims of the '882 patent?
A. Yes. Next.

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Claim 17 requires practicing the method of Claim 1, additionally having at least 200 volts, high-frequency voltage. The reference on Page 1383 specifically mentions 1200 volts at that frequency. So that element is satisfied.
Q. Do you have an opinion as whether Claim 17 of the '882 patent is anticipated by the Slager article?
A. Yes, I do. And it is.
Q. Did you consider any other claims of the '882 patent?
A. Yes. Next.
Claim 54 requires the method of Claim 1 as well as basically having the ability to suction at the target site. And the reference in page 1386 specifically mentions being able to suction the gas bubbles. So that element is satisfied.
Q. Thank you. Dr. Taylor, do you have an opinion as to whether Claim 54 of the '882 patent is anticipated by the Slager article?
A. Yes, I do. And it is.
Q. Did you hear any testimony here at trial, during trial, that supports or confirms your opinions of anticipation of the claims of the '882 patent?
A. Yes.
Q. Did you see DTX-600, the manual of operations for System 970 during this trial?

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A. Oh, yes. It's not here, is it?
Q. I think we can call it up for you.
MR. MARSDEN: Gary, can you call up DTX-600 please?
MR. BOBROW: Your Honor, before we get into this, I believe this is beyond the scope. I don't believe there is any opinion that this witness has offered in his expert report about the relationship between claims and the 970 operator's manual.
MR. MARSDEN: Your Honor, his expert report referred to the 510-K which included the manual and, of course, also reserved the right to address any evidence as it came up at trial. But he expressly referred to the 510-K in his expert report and the 510-K has included, as part of the submission, this manual.
THE COURT: Well, I guess the point is if the analysis he intend to give today wasn't included in his report, it doesn't come in today.
MR. MARSDEN: Your Honor, I believe it is. I can hand up his report.
(Documents passed forward.)
MR. BOBROW: What page?
MS. MacFERRIN: Page 11.
MR. BOBROW: Your Honor, there is a reference there to the 970, but this is the question of enablement.

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It has nothing to do with the question of anticipation. Right now, what the witness is trying to do is show that this is in some way anticipated, not on a question of enablement. I believe it's clearly beyond the scope.
MR. MARSDEN: We will be relying on it for both issues and we will be address the nonenablement issue next.
THE COURT: I don't see that it's -- I don't see in the report if it's limited to enablement. So I'll allow the testimony.
MR. MARSDEN: Thank you, your Honor.
Gary, could you pull up Page 14, please?
- - -

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BY MR. MARSDEN:
Q. Were you in court when I asked Mr. Baker about this description of the principle of operation of the System 970?
A. Yes, I was.
MR. MARSDEN: If you could blow up the first paragraph, please, Gary...
BY MR. MARSDEN:
Q. Do you have any opinion as to whether ArthroCare's description of the mode of operation or the principle of operation of its System 970 is consistent with the opinion that you have offered here in court in this morning?
A. Yes. Essentially, the opinion that I have, I think what is confirmed here in the text, is that the system operates in the same manner as a conventional electrosurgical system, use of arcing and such, that is described by what is known as prior art, stuff that has been known for a long time.
Q. Thank you, Dr. Taylor. Do you have any other opinions regarding the validity of the '882 other than anticipation, which we have discussed?
A. When you say other opinions, could you be more specific?

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Q. Right. Do you have any other basis for believing that the Claims of the '882 patent are invalid?
A. I am sorry, I am blanking on this.
Q. Sure.
A. When you say other opinions, do you mean other facts?
Q. Do you understand that ArthroCare contends that what is taught in the '882 patent is a new phenomenon?
A. I see what you mean. No, it is not a new phenomenon. It's been anticipated, it's been described in the prior art.
Q. If, in fact, it is a new phenomenon, do you believe there is an additional basis for the '882 patent to be found invalid?
A. Yes. One of the concerns I have -- I think I expressed this yesterday -- is that if the '882 patent is found to be invalid, then a large number of the devices that I have developed and, for that matter, a large number of the devices that have been developed in electrosurgery will infringe, because of the fact that what they are claiming is extremely broad.
Q. Does the '882 patent teach anything about how to achieve a new phenomenon that is different than the principle of operation f conventional electrosurgical devices?
A. No, it doesn't. I was perplexed and, frankly, am

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still perplexed about the overall phenomenon of Coblation.
Q. And is that defense also sometimes called nonenablement?
A. Yes, it is.
Q. Do you have an opinion as to whether the claims of the '882 patent are enabled to the extent it claims a new phenomenon?
A. Yes, I have an opinion.
Q. What is that opinion?
A. That it is not.
Q. Thank you.
Let's turn, then, to the '592 patent, the last of the three patents.
Can you first locate the '592 patent in your binder?
I misspoke. I got ahead of myself. Have you prepared a board for the '592 patent?
A. Yes, I have.
Q. And first, can you remind the jury what claims are at issue in connection with the '592 patent?
A. Yes. There are actually two sets of claims. The first set is shown on the board. It's on the easel. The second set Katie is holding. The first set, the independent claim is Claim 1 and the dependent claims are 3, 4, 11 and 21. The second set of claims, the independent

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claim is Claim 23. The dependent claims are 26, 27, 32 and 42.
Q. Let's start with the first set of claims first. Have you performed any analysis or reached any conclusions as to whether those claims are valid?
A. Yes, I have.
Q. What is your opinion?
A. My opinion is they are not.
Q. Why not?
A. They are anticipated in this first set of claims by Doss '007, and as indicated there.
Q. Have you prepared a series of -- first of all, have you done an element-by-element comparison of the teachings of the Doss '007 patent to the asserted claims we have up on the board of the '592 patent?
A. Yes, I have.
Q. Have you prepared some slides to illustrate that?
A. Yes.
Gary.
This particular patent, Claim 1, also has three steps. The first step is positioning an electrode terminal into at least close proximity with the target site. The Doss '007 patent, the active electrode is shown in the red here, described in the text there. This has to be done in the presence of electrically conductive fluid. So that

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element is satisfied.
As I mentioned, it has to be done in the presence of electrically conductive fluid. And the inlet for that fluid is shown here. The fluid path is shown in the blue. So that element is satisfied.
The next element or next step is positioning a return electrode such that a return electrode is not in contact with the body structure, and generate a current flow path between the active electrode and electrode terminal and the return electrode. The return electrode is shown here in the yellow, as you can see, the eye is down here. It is not in contact with the eye. That is described in the text, in Column 5, Lines 27 to 31, and also Column 3.
Q. You see a series of these illustrations. Can you tell us what the relationship is of Figure 7 and Figure 8 is?
A. Sure. Figure 7 is a side view, sort of a cross-sectional side-view, of the device. And you see here the active electrode, the return electrode, fluid inlet path -- actually, the fluid inlet path goes this way and comes out that way. And then Figure 8 is an end view, if you will, of the probe, and it shows, you go from outside to in. The housing, insulation, lumen, return electrode, insulation, active electrode, and then the

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lumen for that.
Q. Thank you. Can you proceed, please?
So moving on, that step of the method is satisfied.
Lastly, you have to apply a high-frequency voltage to the electrode terminal between the electrode terminal and return electrode to generate a current flow path. And that is specifically mentioned in Column 3 and Column 5. That basically describes that reference. So that element is satisfied.
Q. Do you have an opinion, then, as to whether Claim 1 of the '592 patent is anticipated by the teachings of the Doss '007 patent?
A. Yes, I do. And it is.
Q. Did you compare the Doss '007 patent to any other claims?
A. Yes.
Next.
Claim 3 requires the method of Claim 1, and additionally, immersing the target site within a volume of electrically conductive fluid.
As I mentioned, the fluid flow path is here. Basically, there is a dam that prevents the fluid from leaking out past the cornea.
The cornea is immersed in electrically

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conductive fluid. And that is satisfied.
Q. Do you have an opinion as to whether Claim 3 of the '592 patent suspect anticipated by the teachings of the Doss '007 patent?
A. Yes, I do. And it is.
Q. Did you look at other claims?
A. Next, Gary.
The next claim is Claim 4, which requires the method of Claim 1, and additionally delivering electrically conductive fluid to the target site. I think I have already described that that is satisfied.
Q. Do you have an opinion as to whether Claim 4 of the '592 patent is anticipated by the Doss '007 patent?
A. Yes, it is.
Q. Did you look at other claims?
A. Next. Claim 11 requires the method of Claim 1. Additionally, that the electrically conductive fluid be isotonic saline. There is a reference in the text, Column 3, Lines 65 and 66, that basically says the fluid should be preferably isotonic saline.
Q. Do you have an opinion as to whether Claim 11 of the '592 is anticipated by the Doss '007 patent?
A. Yes, I do. And it is.
Q. Did you look at any other claims of the '592 patent in connection with Doss?

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A. Yes.
Next.
That is Claim 21, which requires the method of Claim 1 and additionally that the voltage be in the range of 500 to 1400 volts peak to peak.
And Column 3, Lines 34 to 38, specifically mention voltage of 20 to 200 volts RMS. The conversion factor on a waveform for both RMS and peak to peak is 2.83. When you do the arithmetic, it's 560 volts max. So that claim is satisfied.
Q. Do you have an opinion as to whether Claim 21 of the '592 patent is anticipated by the Doss '007 patent?
A. Yes, I do. And it is.
Q. Are we done with this board?
A. I think we are done with this set of claims, yes.
Q. We will move to the last board, please.
Did you perform an analysis of whether the additional claims, asserted claims of the '592 patent, are valid?
A. Yes, I have.
Q. What is your conclusion?
A. My conclusion is they are not.
Q. Why not?
A. Based on the prior art of the Slager article, they are not. They are anticipated.

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Q. Did you do an element-by-element comparison of the teachings of the Slager article to the additional asserted claims of the '592 patent?
A. Yes, I did.
Q. Did you prepare some slides to show that?
A. Yes. As I mentioned before, the dependent claims, 26, 27, 32 and 42 are dependent on Claim 23. So I started with Claim 23. And Claim 23 requires contacting, as its first step, contacting an active electrode with the body structure in the presence of electrically conductive fluid. That is shown here in the diagram. It's on Page 1383 of the article.
Next.
Q. Is that element satisfied?
A. Yes. I am sorry. That element was satisfied. Actually, it gets satisfied here.
Part of the remainder of that element is in the presence of electrically conductive fluid. On Page 1383 the article mentions it's immersed in saline solution. The rest is the return electrode away from the body structure in the presence of electrically conductive fluid. The article specifically mentions that the electrode is immersed in saline solution. So that element is satisfied.
Next. Maybe you can highlight the last

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paragraph there on the left-hand side. Regardless, the next step is applying a high-frequency voltage between the active electrode and the return electrode such that the electrical current flows from the active to the return electrode, using the electrically conductive path. That is shown here diagramatically with the electrode and the steam layer and so forth.
So that element is satisfied.
Q. Do you have an opinion as to whether Claim 23 f the '592 is anticipated by the teachings of the Slager article?
A. Yes, I do. And it is.
Q. Let's move on. Did you consider additional claims that are dependent on Claim 23?
A. Yes. And if we go to Claim 26, and this claim requires the method of Claim 23 and, in addition, immersing the target site within a volume of electrically conductive fluid, so forth and so on, it is indicated on the left-hand side. The article describes on Page 1383 that the aortic segment and return electrode were immersed in saline solution, and sparking occurred. So that element is satisfied.
Q. Do you have an opinion as to whether Claim 26 of the '592 patent is anticipated by the teachings of the Slager article?
A. Yes, I do, and it is.

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Q. Can you continue?
A. The next claim is Claim 27. Claim 27 requires the method of Claim 23. Additionally, delivering the electrically conductive fluid to the target site. And that had to happen, as referenced on Page 1383 of the article.
Q. Do you have an opinion as to whether Claim 27 of the '592 is anticipated by the teachings of the Slager article?
A. Yes, I do. And it is.
Q. Did you consider other claims?
A. Yes. Claim 32 requires the method of Claim 23 and, additionally, that the electrically conductive fluid consists of isotonic saline. The article specifically references on Page 1383 return electrode immersed in saline, 0.9 percent. That is the definition of isotonic saline.
Q. Do you have an opinion as to whether Claim 32 of the '592 is anticipated by the Slager article?
A. Yes, I do. And it is.
Q. And did you consider Claim 42 of the '592 patent?
A. Yes, I did. Claim 42 requires the method of Claim 23, wherein the voltage is in the range of 500 to 1400 volts peak to peak. And at Page 1383 of the Slager article, they specifically mention that the voltage is 1200 volts peak to peak. So that is satisfied.

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Q. Thank you, Dr. Taylor.
So do you have an opinion as to whether Claim 42 of the '592 patent is anticipated by the Slager article?
A. Yes, I do. And it is.
MR. MARSDEN: Thank you very much, Dr. Taylor. I have no further questions.
THE COURT: All right. Why don't we take a 15-minute break before we go into cross-examination?
(At this point the jury then left the courtroom.)
(Short recess taken.)
- - -

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(Court resumed after the recess, and the following occurred without the presence of the jury.)
THE COURT: Let's bring the jury in.
MR. MARSDEN: Your Honor, while we are waiting for the jury, we have made a request to the other side, but we will make it directly to the Court. Now that these prior-art references have been admitted, there are only six of them, they are about a quarter of an inch, we would like permission to add them to the jurors' binders so they have the patents and the six references.
THE COURT: No, I don't think we will do that. Thank you. They will have them in the jury room.
MR. MARSDEN: I thought for the convenience, and the jury understanding they weren't there. There is no argument.
THE COURT: I have never done that.
MR. HEBERT: Your Honor, if we have another minute...
There is an issue with Mr. Raffle's testimony, which will be the next witness.
THE COURT: I don't think we do.
MR. HEBERT: Okay.
THE COURT: The jurors' lunches are here, so

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we can take an early lunch and discuss Mr. Raffle as soon as this witness is done.
MR. HEBERT: I think it is only a two-minute issue, your Honor.
(At this point the jury entered the courtroom and took their seats in the box.)
THE COURT: All right. Mr. Bobrow.
MR. BOBROW: Thank you, your Honor. Good morning, ladies and gentlemen.
CROSS-EXAMINATION
BY MR. BOBROW:
Q. Good morning, Dr. Taylor.
A. Good morning.
Q. Let me ask you, first of all, a couple of questions about the re-examination of the '536 patent. You are aware that the '536 patent is in re-examination right now; is that right?
A. Yes.
Q. And you are aware that the Patent Office has issued a notice of intent to issue a re-examination certificate. Is that true?
A. Yes.
Q. And you are aware, are you not, that in connection with that re-examination proceeding, that the Patent Office considered the Roos '198 patent?

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A. Yes.
Q. And you read in the file wrapper for the re-examination proceeding that there was a board that was convened, that three examiners looked at the Roos '198 patent; correct?
A. Yes.
Q. And notwithstanding that, the Patent Office issued a notice of intent to issue a re-examination certificate, confirming the patentability of the '536 patent over the Roos '198 patent; is that right?
A. I am aware of the notice of intent to issue -- what did you call it again?
Q. A re-examination certificate?
A. A re-examination certificate. I also understand -- and you can correct me if I am wrong -- it's not over until it's over. And the certificate hasn't been issued yet.
Q. The certificate has not been issued yet. But you are aware that the Patent Office wrote in an office action that the claims of the '536 are patentable over the Roos '198 patent, and that that was an office action that was -- was the result of a board of three examiners that had convened to look at the issue; correct?
A. I am aware of that.
MR. BOBROW: May I approach, your Honor?

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THE COURT: Yes, you may.
BY MR. BOBROW:
Q. I have handed you PX-7. And PX-7 is the file history for the re-examination of the '536 patent. You have looked at at least portions of PX-7 before, have you not?
A. I have looked at the file history of '536, which is this document. Is that what you are saying?
Q. You have looked at the file history for the re-examination of the '536?
A. Some parts of the file history of the '536 patent.
Q. Including parts of the re-examination; is that right?
A. Including parts of the re-examination, yes.
Q. And you considered that information in connection with forming your opinions and giving your testimony; correct?
A. I did.
MR. BOBROW: Your Honor, at this time I move PX-7 into evidence.
MR. MARSDEN: No objection, your Honor.
*** (Plaintiff's Exhibit No. 7 was received into evidence.)
BY MR. BOBROW:
Q. Now, I would like to shift gears a little bit. I wanted to ask you some questions about electrically

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conducting fluids. All right?
A. Yes.
Q. Now, one fluid that is an electrically conducting fluid is saline; correct?
A. Yes.
Q. And another one is Ringer's lactate; correct?
A. Or lactate of Ringer's, yes.
Q. Now, there are also fluids that are used in electrosurgery that are electrically nonconducting fluids; correct?
A. Yes.
Q. And glycine is one of those electrically nonconducting fluids; correct?
A. Yes.
Q. And although glycine is called an electrically nonconducting fluid, it nonetheless does conduct electricity, does it not?
A. Yes.
Q. And, in fact, glycine is a fluid that is commonly used in a procedure that you called a T-U-R-P procedure; correct?
A. It's commonly used. It's not the only fluid. But, yes, yes, it's commonly used.
Q. In fact, glycine conventionally has been used by doctors for the T-U-R procedure in the prostate; right?

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A. Can you repeat the question again?
Q. Yes. I was saying that glycine conventionally has been the fluid that doctors have used in performing a TURP procedure, using electrosurgery?
A. Yes.
Q. Now, you had mentioned before that in using an electrically nonconductive fluid like glycine it will nonetheless conduct electricity when you put an electrosurgical instrument into that glycine; right?
A. Yes.
Q. Now, you had said on direct examination, you had mentioned a patent to reduce, the Roos '198 patent. Do you recall that?
A. Yes.
Q. Now, the Roos '198 patent described a device or devices that were to be used in TURP procedures; is that right?
A. Yes. However, you have to keep in mind that when you reference TURP procedures, the way it's most often done is with a monopolar electrosurgical probe, and the Roos patent is a bipolar electrosurgical probe, and it does make a difference.
- - -

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Q. Well, the Roos patent doesn't just talk about bipolar probes, does it?
A. But the configurations we were describing in my direct testimony were bipolar.
Q. That wasn't the question I asked you.
A. I just wanted to explain.
Q. Fair enough. The Roos '198 patent also discusses monopolar uses for TRUP procedures; is that correct?
A. Yes, it does. Sorry.
MR. BOBROW: Why don't we put DTX-11 on the screen, please? DTX-11 is the '198 patent. And let's go to Column 1.
BY MR. BOBROW:
Q. DTX-11 is also in your binder if you care to look at it, but in Column 1 of the '198 patent, if you take a look at around Line 35 when it's discussing the background of the invention...
A. This binder? I'm sorry. Okay. Yes. Column 1.
Q. And if you take a look at Line 35, it references a neutral electrode applied externally to the patient's body.
Do you see that?
A. Yes.
Q. And so by reference to a neutral electrode applied

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externally to the patient's body, here in this paragraph it's describing monopolar electrosurgery; correct?
A. Yes.
Q. And if you go down further to about Lines 52 through 56, there is a discussion there about washing water.
Do you see that? It's Line 54 refers to washing water.
A. Yes.
Q. Now, it mentions here that there is some current flows from the cutting loop via the washing water directly to the metal parts of the endoscope shaft located in the washing water flow and from there to the engaging tissue.
Do you see that?
A. Yes.
Q. Now, given that this is a monopolar electrosurgical setup, you would agree with me, would you not, that the washing water that is being described here is either glycine or some other electrically nonconducting fluid; correct?
A. Yes, it is.
Q. You have no reason to think it's not, do you? That's how the monopolar procedures are done; correct?
A. Glycine, Glanatol (phonetic), something that you would expect to be electrically nonconductive.
Q. And it says there is some current flow in that

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electrically nonconductive fluid from the electrode to the metal parts f the electrode; right?
A. Yes.
Q. All right. Now, in describing in the rest of the patent, it describes some bipolar devices; correct?
A. Yes.
Q. And during your direct examination, you showed one of those devices; correct?
A. Yes.
Q. Now, in the '198 patent, the '198 patent never uses the word saline, does it?
A. Couldn't find it, no, it does not.
Q. It doesn't use the word Ringer's lactate or lactated Ringers, does it?
A. It does not.
Q. And in describing the fluid that is used with the bipolar embodiments, it uses, the phrase at Column 4, Line 54 is calling it a washing liquid; right?
A. Line 54, you said?
Q. Yes, at Column 4.
A. Okay. Yes, it does say washing liquid.
Q. It doesn't call it saline, it doesn't call it lactated Ringer's; correct?
A. No.
Q. All right. In fact, wouldn't you agree with me that

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in this '198 patent to Roos, there is really no difference between the way that Mr. Roos talked about the washing liquid that was used in the monopolar case versus the bipolar case. He describes them as washing water or washing liquid; right?
A. That's correct.
Q. Now, if you would, please, take a look at Figure 5 of the '198 patent.
MR. BOBROW: If you can highlight that, Chris...
BY MR. BOBROW:
Q. And Figure 5 is a depiction of one of the bipolar probes that is described here in this Roos '198 patent; correct?
A. Yes, it's one of the embodiments. Yes.
Q. And as you look up there, you can see there is what he calls a neutral electrode 11 and also number 12 he calls the treatment electrode; right?
A. That's correct.
Q. Now, there is, what I'm circling there with this light pen is the return electrode; correct?
A. And I also he calls it the neutral electrode in the patent, but, yes.
Q. Now, if you take a look at Column 6 at Lines 51 to 53 of the Roos '198 patent, he talks about the neutral

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electrode in this embodiment, doesn't he?
A. Hold on a second. I'm sorry. Which lines again?
Q. This is at Column 6, Lines 51 to 53.
A. Yes.
Q. And it says there that the neutral electrode 11 in the form of the steel band rests on the tissue in large area form so that good electrical contact is insured.
Do you see what I'm referring to there?
A. Yes, I do.
Q. Now, wouldn't you agree with me, sir, that if there were electrically conducting fluid that was filling the environment where the active electrode is and the return electrode is, you wouldn't need to have tissue contact to insure good electrical contact between the active electrode and the return electrode. That would be provided by the saline or the Ringer's lactate or the other electrically conducting fluid; right?
A. From the specific embodiment, your interpretation is correct. However, this is not the embodiment that I talked about and it's not an embodiment that I described.
Q. But for the embodiment I described, that's correct?
A. Yes.
Q. Now, why don't we take a look at the embodiment we did talk about which is Figures 7 and 8 were the ones you had up?

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A. That's correct.
MR. BOBROW: So perhaps we can highlight those.
BY MR. BOBROW:
Q. I'm sorry. Dr. Taylor, are you there?
A. Yes, I am.
Q. Thank you. Now, Figures 7 and 8 you had testified about a little bit earlier and, as I see it there, there is a ring or a band that is called 11.
Do you see that?
A. Yes.
Q. And that's what Mr. Roos is calling the return electrode here; correct?
A. Yes.
Q. All right. Or neutral, I guess. But that's what you are saying is the return electrode for purposes of these claims?
A. Right.
Q. And as I was looking at what you had checked off earlier, for Claim 47 in the Roos '198 patent, it appears that your testimony was that this embodiment f the Roos '198 patent satisfies Claims 47; right?
A. Yes.
Q. And specifically, you offered the opinion that this embodiment satisfied this language that says that the return electrode is sufficiently spaced from the electrode

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terminal to minimize direct contact between the return electrode and the patient's tissue.
Do you see that?
A. Yes.
Q. And that's your testimony, even though the return electrode completely surrounds the probe shaft; right?
A. Yes.
Q. It's exposed for 360 degrees of that shaft; right?
A. Yes.
Q. And it's not spaced very far away from the active electrode, is it? It would be spaced a small distance; right?
A. No.
Q. How far away would it be spaced?
A. Well, if you look at a standard resectoscope -- and I happen to know that in the Roos article what they did is they modified a Carl Storts (phonetic) resectoscope, the cutting loop which is indicated by 12 can move out about -- about an inch and could be retracted almost to the lip there, the plastic insulating member which is indicated by 35. So it has the ability to move in and out. So an inch is pretty far for an electrode.
Q. So the loop isn't also positioned an inch away from the return electrode?
A. It's not always, but it can be.

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Q. What you do is you retract the treatment electrode back in towards the return electrode; correct?
A. Yes, you do.
Q. That's the technique. It extends out and you pull it back towards the return electrode; right?
A. Right.
Q. And in the TRUP procedure, I take it that this device here is traveling a fairly tight, a tight lumen, as it were; right? It goes up to the urethra, doesn't it? That's the passageway into the body, isn't it?
A. Oh, I see. I'm sorry. I thought you were back at the electrode again. Yes, the device does go into the urethra and it also can be used for treating the bladder, in which case the neutral electrical would be almost entirely or it could be almost entirely inside the bladder. The bladder, in order to operate on the bladder, you have to distend it, which means you put fluid into it and make it large. And the bladder distended is, oh, about the size of my fist. I guess it depends on how big your bladder is. But when you have the instrument all the way in the bladder, the return electrode is entirely, entirely engulfed by fluid.
Q. Right. And in the conventional monopolar way, that would be in a glycine solution; right?
A. That's correct. But, in this particular case, that's

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not what they used.
Q. Right. All right. Instead, they used washing liquid; right?
A. Yes.
Q. That's what the patent says?
A. Yes.
Q. Now, let's take a look at Figure 1 of this patent. And Figure 1 is describing another bipolar embodiment of Roos, is it not?
A. Yes, it is.
Q. And there is a little hook there. That's the treatment electrode; right?
A. Yes.
Q. And here, there is a return electrode also; right? Or a neutral electrode as he calls it?
A. Yes.
Q. And that neutral electrode is within that endoscope. It's covered up by some sort of insulation there, isn't it?
A. Yes.
Q. So the neutral electrode is located within the endoscope; right?
A. In this case, it is.
Q. Now, let's go to Claim 1 of the Roos '198 patent. And do you see that, sir?
A. I've got it right here.

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Q. Right. And this claim, Claim 1, actually has as a limitation that the return electrode is or it says the neutral electrode is located within said endoscope body. Do you see that? That's at about line --
A. I know it's here. What line is it?
Q. About Line 58.
A. Yes. I'm sorry. Yes, I've got it.
Q. And you would agree with me that Claim 1 as it's written here actually covers the embodiment we were just looking at, Figure 1?
A. It covers Figure 1. It covers 7 and 8, too.
Q. Let's take it in pieces.
A. Okay.
Q. First, you would agree with me this covers Claim 1?
A. Yes.
Q. And your testimony is that Claim 1 covers also Figures 7 and 8?
A. Covers Figures 7 and 8. And I think it actually covers Figure 5, too, but I had to go back and look.
Q. Now, first of all, would you agree with me that, in the Roos '198 patent, there isn't any discussion or suggestion that the fluid that is used with Figure 1, that device is any different than the fluid that is used with any of the other devices? Would you agree with me on that?

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A. I don't believe there is any differentiation of the fluid.
Q. Right. So the way that the fluid is described in this reference, same fluid for Figure 1, Figure 2, Figure 7, Figure 8; correct?
A. That's correct.
Q. All right. Now, I believe you testified here just now that you believe that this claim, Claim 1, also covers Figures 7 and 8; is that correct?
A. That's correct.
MR. BOBROW: Now, why don't we put Figures 7 and 8 up on the board?
BY MR. BOBROW:
Q. Now, for Figures 7 and 8 to fall within the scope of Claim 1, this neutral electrode, right there, right here, would have to be located within the endoscope body; correct?
A. That's correct.
Q. And you recall that I took your deposition probably about two months ago; right?
A. Oh, yes. That was fun.
Q. And back at that time, when I did take your deposition, I asked you about this issue, didn't I?
A. Yes, you did.
Q. And I asked you whether or not, back at that time,

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whether or not you agreed with me that Claim 1 didn't cover Figures 7 and 8; correct?
A. Yes.
Q. And you were under oath at that time; right?
A. Sure was.
Q. Just like now?
A. Yes.
Q. And back at that time, you had also studied the Roos '198 patent before you testified?
A. Yes.
Q. The Roos '198 patent wasn't something I'd showed you that day and asked you questions about?
A. I studied it intensely.
Q. Right. And when I asked you for the first time about whether or not Claim 1 covered Figures 7 and 8, you told me under oath, you didn't?
A. That's right.
Q. You remember that very well?
A. That's right. Because I corrected it.
Q. Right. You corrected it after lunch, didn't you?
A. Yes, I did.
Q. You corrected it after you had lunch with Smith & Nephew's lawyers?
A. I actually corrected it because I looked at the diagram again.

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Q. Please answer my question.
A. I did have conversation after lunch, yes, and with lunch.
Q. And that was Mr. MacFerrin, Smith & Nephew's attorney?
A. Yes.
Q. And Mr. MacFerrin, during your deposition, was also acting as your lawyer; right?
A. Yes.
Q. You were represented by the very same lawyers that are representing Smith & Nephew here in court today; isn't that right?
A. Yes.
Q. And you had been retained or you had retained that firm and you considered there to be an attorney/client privilege between discussions that you had with Smith & Nephew's lawyers; correct?
A. Yes.
Q. And I asked you some questions during the deposition and you refused to answer some of them based upon the fact there was an attorney/client relationship?
MR. MARSDEN: Objection. This is improper questioning about assertions of the attorney-client privilege.
THE COURT: Where are we going with this, Mr. Bobrow?

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MR. BOBROW: I believe it goes to the credibility of the advise of the witness.
THE COURT: Because he didn't answer questions at a deposition?
MR. BOBROW: Based upon his relationship with the Smith & Nephew's lawyers.
MR. MARSDEN: Based upon privilege.
THE COURT: And what was the last question that you asked?
MR. BOBROW: The last question I believe was that he had refused to answer questions I had asked him at the deposition based upon the attorney/client relationship that he had with his lawyers.
THE COURT: All right. That's an appropriate question, but then you need to move on.
THE WITNESS: Where were we?
BY MR. BOBROW:
Q. I just asked the question, you refused to answer some questions that I asked you during your deposition based upon the attorney/client relationship with the same lawyers that are representing you as Smith & Nephew?
A. Yes.
Q. And you're not paying and haven't paid the Smith & Nephew's lawyers any money for their services, have you?
A. No, I have not.

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Q. You understand that the time that they've spent with you has been reimbursed or compensated by Smith & Nephew; right?
A. I certainly understand they're being reimbursed by Smith & Nephew.
Q. Now, not only did you testify when I asked you in your deposition that these Figures 7 and 8 aren't covered by Claim 1 the first time I asked you, but after lunch, you did come in and you said your testimony was now different, that you believed it was covered by Claim 1; right?
A. I made a mistake, yes, and I corrected it.
Q. And isn't it true also that Smith & Nephew's lawyer during that lunch break pointed out that mistake to you?
A. Yes, he did.
Q. Right. And during that lunch, Mr. MacFerrin was the one who said, Hey, I think that this was wrong with respect to Figure 7, it is covered by Claim 1 and let's go through it; right?
A. I don't think it was exactly that way. I think basically he asked me to refer back to my report, remember what I said in my report.
Q. Well, let's look at that because in your report, you also talked about whether Claim 1 covers Figure 7; correct?

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A. Yes.
Q. And in your report, you addressed the question of whether or not this neutral electrode, right here, and right here, whether that neutral electrode is an electrode that is within the endoscope body; correct?
A. Yes.
Q. And that was a report that you prepared prior to the deposition back in I believe it was late March; right?
A. Are you referring to the report or the deposition?
Q. I'm sorry that I was unclear. Let me try to restate it. The report that you prepared where you discuss Figure 7, that report was prepared before I took your deposition; right?
A. Yes.
Q. All right. And even before I took your deposition, you also signed a declaration about your report, didn't you?
A. Oh, yes. Yes.
Q. And you declared under the penalties of perjury that you believed what you said in your report was true?
A. Right.
Q. And that was a report that you had prepared prior to your deposition; right?
A. Right.
Q. And, obviously, prior to the lunch that you had with

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Mr. MacFerrin during the middle of the deposition; correct?
A. Correct.
Q. All right. Now, I have your report in that white binder, and I direct your attention, please, to Page 18 of your report. This is your expert report of February 17, 2003.
Do you have that, sir?
A. Yes.
Q. And in the middle of page 18, you address in your report the question of whether Claim 1 covers Figures 7 and 8; right?
A. Yes.
Q. And when you wrote your report, let's just -- when you wrote your report, what you wrote was, quote, it is particularly important to note that in connection with the endoscope shown in the Roos '198 patent at Figures 7 and 8, there is no plastic cover and the neutral electrode is on the outside of the endoscope, not arranged within it.
Correct? That's the sentence you wrote in your report of February 17 of 2003; correct?
A. Yes, that's in the report.
Q. Right. And what you just wrote there, not arranged within it, those were your words; correct?
A. Yes.
Q. You wrote those words yourself; right?

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A. Yes.
Q. And you wrote those words to describe Figures 7 and 8; right?
A. That's right.
Q. Now, in connection with your work on this matter, I take it that you have also reviewed --
A. Excuse me. Can I put this away?
Q. Sure.
(Pause.)
BY MR. BOBROW:
Q. You have also reviewed another patent to Mr. Roos; correct?
A. The '667? Is that the one are you talking about?
Q. Exactly. You reviewed that reference, the Roos '667 patent, in connection with your work on this matter; right?
A. Yes, I did.
Q. And you, in fact, considered this reference at the time that you wrote your report; correct?
A. Yes.
Q. All right.
MR. BOBROW: Your Honor, may I approach?
THE COURT: Yes, you may.
(Document passed forward.)

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BY MR. BOBROW:
Q. Sir, I have had handed you PX-605, which is a patent to Roos, Eberhard Roos from Germany, U.S. Patent Number 4,706,667.
Do you see that?
A. Yes.
Q. And this is the Roos patent that you considered in connection with your work on this matter; is that right?
A. It looks like it's the patent. Yes. Excuse me.
MR. BOBROW: Pardon me, Dr. Taylor.
Your Honor, I move PX-605 into evidence.
THE COURT: Any objection?
MR. MARSDEN: No objection.
THE COURT: All right. Thank you.
THE DEPUTY CLERK: So marked.
*** (Plaintiff's Exhibit No. 605 was received into evidence.)
BY MR. BOBROW:
Q. Now, the '667 patent was issued to Eberhard Roos; right?
A. Yes.
- - -

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Q. He is the same man who is on the Roos '198 patent that you talked about earlier on your direct examination; correct?
A. Yes, he is.
Q. And he is the same man who is the Roos in the Elsasser and Roos article; right?
A. Yes, he is.
Q. And this patent is dated in, issued in November 1987; correct?
A. Yes.
Q. In this patent, the '667 patent, Mr. Roos actually talks a bit about the German application that was the predecessor, or sometimes it is called the parent application, to what ended up issuing as the Roos '198 patent; correct?
A. Yes. You are talking about -- do you have a specific reference?
Q. Sure. Why don't we bring up Column 1 of the '667 patent, beginning at Line 14, going down to Line 29. Perhaps we can highlight that paragraph.
You will see at the top there it refers to a known electrosurgical high-frequency cutting instrument of this kind. Then it gives a number that begins DE-OS. And it goes on there in there; right?

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A. Yes.
Q. And the DE stands for Germany; right?
A. Deutsch, yes.
Q. Exactly. What is being referred to here in the '667 patent, when it refers to that No. 25 21 719, that is actually the German parent application to the Roos '198 patent; right?
A. That's correct. At least that's my understanding, anyway.
Q. In fact, on the '198 patent, that number, 25 21 719, appears right on the front, doesn't it?
A. It does.
Q. Here, in the '667 patent, in this paragraph, Mr. Roos is talking about one of the instruments that is described here in the '198 patent; correct?
A. You are talking about the paragraph that starts at Line 14, going down?
Q. Exactly. And he is talking there, is he not, of at least Figure 1 of the '198 patent?
A. He is talking about -- I am not sure which one he is referring to, he is talking about one of the instruments in that application.
Q. Right. And he says there that the neutral electrode is admittedly arranged in the immediate vicinity of the cutting loop. It is, however, so separated from the tissue

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by a plastic cover or by its arrangement in an endoscope that it can only enter into electrical contact with the cutting electrode electrolytically via the secretion which is present during the cutting process.
You see what I am referring to there?
A. Yes.
MR. BOBROW: Why don't we put up Figure 1 of the '198 patent to Roos? Paragraph. If we can put it up on the same screen... If not, just put up the '198
BY MR. BOBROW:
Q. There we have Figure 1. You can see in Figure 1, can you not, there is this sort of shadow right there, that's the plastic cover; right? This portion that sticks out over this endoscope; right?
A. The one that is labeled 11?
Q. I think it's labeled 18, right there. That's the plastic cover; right?
A. Yes.
Q. And what we just read in the Roos '667 patent, the later patent, it's talking there about an electrode that is separated from the tissue by a plastic cover; right?
A. Sorry. Say that again?
Q. In the '667 patent, it talks about a cutting electrode that is separated from the tissue by a plastic cover?

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A. Yes.
Q. So it is pretty clear, is it not, that at the very least, in the '667 patent, Mr. Roos is talking about Figure 1; correct?
A. Well, he certainly could be. Certainly, the Figure 1 that is in the '198 patent may be the figure that he is discussing here -- or the configuration, I should say, that he is discussing in the '667. He didn't specifically call it out. So we are surmising here, I guess, aren't we?
Q. Given that there is the plastic over that embodiment and there isn't plastic over any other one, wouldn't you agree that what he is talking about there is Figure 1?
A. Most likely. But I can't confirm it. It's most likely the case.
Q. Fair enough. So here, for this embodiment -- this is a bipolar embodiment; right?
A. That's my understanding, yes.
Q. This is an embodiment that Mr. Roos in his '198 patent said was used with washing liquid; correct?
A. Yes.
Q. Those are the words that Mr. Roos used in the '198 patent that you talked about on your direct examination?
A. That's correct.
Q. And if we can go back to the '667 patent and highlight that language, what Mr. Roos is saying there

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in this patent is that using this device as it was designed, that the return electrode and the treatment electrode can only enter into electrical contact with the cutting electrode electrolytically via the secretion which is present during this cutting process.
Right? That's what he says?
A. That's what he says.
Q. Wouldn't you agree with me, sir, that if there were saline or Lactated Ringer's that were present in that fluid, in that washing liquid as he describes, one would not need secretions from the body to make that fluid electrically conductive so as to electrically connect the treatment electrode with the neutral electrode? The liquid would already be conductive and secretions wouldn't be needed; isn't that right?
A. And that's actually one of the reasons why this particular passage in '667 is confusing, because of the fact that we know that at least one configuration of Roos works, clinically works, because he couldn't have conducted 32 procedures without being able to resect tissue. And he did resect -- let me finish, please. He did resect tissue using washing liquid.
So that's one of the reasons why this particular passage is confusing to me.
Q. Well, let's back up a little bit then, because you

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also testified earlier about the Roos and Elsasser article; correct?
A. Yes.
Q. And the reduce and Elsasser article talks about some surgeries that were performed; right?
A. Correct.
Q. And in the Roos and Elsasser article, the instrument that was used was essentially the instrument from Figures 7 and 8 of the '198 patent; right? That's the one that was used to perform the surgery?
A. That configuration was the one that was used to perform the surgeries. They also tried another configuration, and I have forgotten which figure it refers to in the patent, that worked but not as well.
Q. But the one in reference to that you said was used in surgery, that is Figures 7 and 8 in the '198 patent? That's the one that is described?
A. Absolutely.
Q. Not Figure 1, correct, but they describe Figures 7 and 8?
A. Okay.
Q. So my questions have to do right now with what is described here for Figure 1 and this language here in '667.
Now, wouldn't you agree with me, sir, that if

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the liquid used with Figure 1 were electrically conductive fluid when it was introduced into the surgical site, that secretions into the fluid would not be necessary in order to make it electrically conductive so as to electrically couple the active and the return electrode together? Wouldn't you agree with that?
A. I would agree with you. But once again, it's confusing, because I think you have already established, in the course of your examination on me, that the washing liquid that was used in '198 is the same washing liquid throughout; right? And, therefore, if the washing liquid that was used -- that was used throughout all the different configurations, if the washing liquid was successful in Figures 7 and 8, clinically, then it must have been electrically conductive fluid. There is a logical connection there.
Q. Well, that's what you are saying now. But isn't it true, sir, that electrical current can flow through electrically nonconductive fluids? Isn't that true?
A. Yes, it can.
Q. And isn't it also true that if an electrically nonconductive fluid were introduced into the surgical site, that you would need secretions from the body in order to make the fluid conductive so as to maintain a good electrical connection, electrolytic connection between the

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treatment electrode and the neutral electrode? Isn't that true?
A. Explain to me the logic again?
Q. I am simply saying, sir, that if electrically nonconductive fluid were introduced, if that was introduced into the body, then in order to electrically connect and have a good electrical connection between the treatment electrode and the neutral electrode, you would need to have secretions from the body in order to make that fluid electrically conductive?
A. In which case the fluid would be electrically conductive, right.
Q. I am simply saying if you introduce a nonconductive fluid and there are secretions into the fluid, then you would need those secretions to have an electrolytic connection between the treatment electrode and the neutral electrode; right?
A. I follow your logic. And once again --
Q. Can you please answer the question?
A. The answer is yes. I follow your logic, but it's confusing. That's all.
Q. But I just want it to be clear that your answer to my question is if you introduce an electrically nonconductive fluid, you would need secretions from the body to couple the treatment electrode to the return

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electrode. Is that a true statement?
A. I think the answer is yes. But I still think it's confusing.
Q. All right. Now, let's see if we can go through the rest of this paragraph and see if there is any more clarity here, because it also says, in this paragraph in Column 1, that because of this problem, that the device was relying upon tissue discretions, it says that it was difficult to maintain the current intensity required for trouble-free cutting in a required, precisely defined manner at the cutting electrode.
Do you see that?
A. Yes.
Q. And the import of that is that the fluid that was being used with this Roos '198 patent, Figure 1, was that the fluid wasn't sufficiently conductive to be able to do trouble-free cutting; correct?
A. One of the problems I am having with this is, this particular paragraph doesn't even reference any fluid at all. So I am wondering if this device wasn't used or intended to be used for open surgery.
Q. Well, that is not how it's described in the '198 patent, is it? In the '198 patent it says that Figure 1 is used with washing liquid; right?
A. The thing is, if you read the first sentence, in a

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known electrosurgical high-frequency cutting instrument of this kind, does that mean it is exactly the same or does that mean it is sort of similar?
Q. In that description he cites specifically to the parent application to the '198 patent; right?
A. I agree with you on that.
Q. In the '198 patent, every single device that is described in there is designed for use with fluid; correct?
A. Yes, it is.
Q. And in every single one of those, every single embodiment in the Roos '198 patent is described as being used with some type of washing liquid; correct?
A. It is.
Q. All right. Now, wouldn't you agree with me that what Mr. Roos is saying here in his patent, when he is describing the parent application to the '198 patent, he is saying here that when you use this instrument that there was not sufficient discretion from the body to make the fluid sufficiently conductive so that you could get trouble-free cutting? Isn't that the import of this paragraph?
A. He is saying that. But there is no reference to any other fluid.
Q. But that is the import of this paragraph; correct?

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A. Yes.
Q. All right. Now, I have another question about the Roos '198 patent.
If we could put that back up and take the '667 patent down...
In the '198 patent, there are of course a large number of figures and we have gone through a couple of those already; correct?
A. Right.
Q. I think earlier you had put up on the overhead Figures 7 and 8 when you were going through your direct examination; correct?
A. Yes, I did.
Q. And one of the things that you said was that in the '198 patent that there is a disclosure of a connector; correct?
A. Yes.
Q. And you said that the connector was located, the language of the claim says that the connector is near the proximal end of the shaft; right?
A. Yes.
Q. And so it's your testimony here today that the figures of the '198 patent show there is a connector near the proximal end of the shaft; is that right?
A. Yes.

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Q. And so I take it what that means is that you have been able to review the Roos '198 patent and you have been able to locate somewhere in those figures some discussion of the location of where the connector is to connect back to the generator; right?
A. Well, there is a connector. There has to be.
Q. I am not asking you that question. I am saying that you have been able to review the '198 patent and you have been able to discern some description in there of the location of the connector. Not that there is one. But the specific location of it; right?
A. There is not a specific reference to a location of the connector.
Q. All right. So here, when you marked on this board that the limitation was met, that the connector is near the proximal end of the shaft, the Roos '198 doesn't say where the connector is; correct?
A. The patent does not say -- the patent does not say explicitly where the connector is located.
Q. All right. Now, since we are on the subject of Mr. Roos --
A. You do realize that all resectoscopes have connectors at the back end of the resectoscope.
Q. I don't realize that. In all events, in the '198 patent, there is no discussion of where the connector is;

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correct?
A. That's correct, yes.
Q. When you said there is that discussion, that wasn't true, was it?
A. No, but then again --
Q. There is nothing in the '198 patent that says that; correct?
A. There is nothing in the '198 patent that says it explicitly. But there are no resectoscopes on the market that don't have a connector at the end, on the back of the resectoscope.
Q. In the market, you said?
A. In the market.
Q. Why don't we turn, then, to DTX-59-A and B. This is the Roos and Elsasser article. Perhaps we can put up the German language original. Do you have that, sir?
A. Yes.
Q. Why don't we go to Figure 3.
Now, if we can highlight Figure 3, please.
Here in the Roos and Elsasser article, in the first part f the article, once again, there is a discussion of a monopolar TURP procedure; correct?
A. You are asking me if there is a discussion of conventional TURP?
Q. Monopolar?

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A. Yes, there is.
Q. And Figure 3 is one of the figures that Roos and Elsasser used to describe that conventional monopolar procedure; correct?
A. I am just reading the English version of this.
Q. Fair enough. I am, too.
A. Yes, it is.
Q. And so what is being shown here in Figure 3 is a resectoscope that is being inserted into the body; correct?
A. Well, I believe what is being shown here, you have got the resectoscope there. This represents the bladder. And this represents the prostate.
Q. So right here, that region that I am circling now, which is cross-hatched at about a 45-degree angle, that area there is the prostate; is that right?
A. That is correct.
Q. And that's tissue?
A. Yes, us men would consider it to be tissue.
Q. Fair enough. And so here, this is the tip of the resectoscope; right?
A. Yes.
Q. The part that I am circling there. And this little loop here, that is the treatment electrode; correct?
A. That's the cutting loop, yes.

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Q. And these lines here that go back to the resectoscope, those are current flux lines; correct?
A. Yes.
Q. And what is being depicted here is current flux lines between this loop and the flux lines going back to essentially a metal portion of this resectoscope; right?
A. That's right.
Q. And you already said that this is a monopolar embodiment; correct?
A. For conventional -- yes.
Q. What is depicted here is monopolar; right?
A. Right.
Q. There is no return electrode there, is there?
A. Right.
Q. What this is then showing is current flow through what must have been electrically nonconductive fluid because that is the fluid that was used in monopolar electrosurgery; correct?
A. Actually, this diagram is not entirely correct, because what actually happens is you have current flux lines that flow back to almost all parts of the body, including at the endoscope.
Q. But this is showing current flow through what must have been a nonconductive fluid because nonconductive fluids were used in monopolar TURP procedures; right?

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A. It does show current flow. Like I said, it is not entirely correct.
Q. But let's talk about the part that is correct. I think it's correct, isn't it, that this fluid that the tip of this device is in would have been essentially something like glycine or some similar electrically nonconductive fluid. You wouldn't in a monopolar device using saline or Ringer's lactate?
A. The Europeans favor mannitol. But it could have been glycine.
Q. In all events, it could have been glycine; right?
A. That's correct.
Q. Now, similar to the '198 patent, the Roos article doesn't use the word saline; correct?
A. It uses washing liquid or washing fluid, something to that effect.
Q. I think it's to that effect. The words are a little bit different. But he doesn't use saline; correct?
A. He does not use saline.
Q. He doesn't use Ringer Lactate or Lactated Ringer's?
A. Correct.
Q. I think what he does say, if you look at the English translation at Page 2, it's described as irrigation liquid; correct? About the middle of the page, sir.
A. Yes. The irrigation liquid.

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Q. And so that irrigation liquid would have been glycine or mannitol or some electrically nonconductive fluid; right?
A. I think at this point, isn't he talking about his invention, the actual --
Q. Well, this is a discussion of Figures 2, 3 and 4. And so we are talking here about a conventional approach; correct?
A. Oh, I am sorry. Yes, you are right.
Q. Fair enough.
Now, just to anticipate maybe where you were going, if you turn to page and look at Page 4, I believe here he is talking about the bipolar embodiments; right? This is the beginning of that discussion?
A. Yes, that's right.
Q. And in Paragraph No. 1, at the very end of that sentence, he talks about the fluid that is used. Do you see that?
A. Yes.
Q. And he calls it irrigation liquid; right?
A. Yes.
Q. And those are the same words that he used to describe the fluid that was used for the monopolar embodiment on the previous page; correct?
A. Yes. Not the same fluid, but yes.

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Q. He describes them using the exact same words, doesn't he?
A. He uses the exact same words, yes. But that doesn't necessarily mean it's the same exact fluid.
Q. The same words are used; right?
A. Yes.
Q. Now, let's go back to the previous page.
A. Are we on Page 3 now?
Q. I am sorry. I believe we are on Page 2. Again, this is the monopolar embodiment, so we know that it would be mannitol or glycine or some similar fluid; correct?
A. That's right.
Q. Now, if you look at the English language text for Figure 3 that we were looking at earlier, do you have that, at the very bottom of Page 2?
A. Right.
Q. And in that description, Mr. Roos and Mr. Elsasser are describing that current flows directly from the cutting loop to those parts of the resectoscope projecting into the irrigation fluid. Do you see that? That's in the text at the very bottom of Page 2.
A. Yes.
Q. So here in the article, Elsasser and Roos are talking about current flow in the monopolar embodiment; right? From the cutting loop back to the resectoscope; correct?

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A. Yes.
Q. Let me shift gears and ask you some questions about the Doss '007 patent. Do you have that, sir? That's DTX-17.
A. I have it in front of me, yes. Yes, I do.
Q. And the Doss patent is one of the patents that you talked about on your direct examination with respect to the '536 patent; correct?
A. Yes.
Q. And the Doss patent is a patent that was actually cited during the prosecution of the '536 patent itself; right?
A. I will take your word for it. There were a lot of patents that were cited and I don't have that in front of me. So I will take your word for it.
Q. Why don't we actually show it.
MR. BOBROW: why don't we pull up JTX-1?
BY MR. BOBROW:
Q. And if you look in the U.S. patent document section, if you highlight that, you will see, I believe it's the fifth one down, it says, 4,381,007 to Doss.
Do you see that?
A. It is verified, you are right.
Q. And so the document that you were describing earlier as the Doss patent, that patent was considered by the

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Patent Office in relation to the prosecution of the '536 patent?
A. That's correct.
Q. And the '536 patent and its claims issued over this Doss patent; right?
A. That's correct.
Q. And the Doss patent also was given to the Patent Office in connection with the re-examination of the 536 patent; correct?
A. Once again, there were a lot of patents that were considered.
Can you show me that, just so we can clarify it?
Q. Maybe we will get to that a little later. Why don't we talk about what is actually in the Doss patent at this point?
A. Okay.
Q. Now, in the Doss patent, why --
MR. BOBROW: Why don't we put up Figures 7 and 8?
BY MR. BOBROW:
Q. I think those were the figures that you had up earlier.
In this patent, this was the figure that you had up earlier, right, just without the colors?

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A. Yes.
Q. And now, in the text of this patent, the Doss patent, in the text of it, there is no description of any of the electrodes that are shown in this embodiment.
They are never described as being a return electrode; correct?
A. We specifically mentioned those words are not specifically used, return electrode?
Q. That's correct.
A. Yes.
Q. Return electrode is not a term that is used here, is it, in the Doss '007 patent?
A. Just hold on a second.
I don't believe it's used.
Q. Right. In fact, if you look at Column 4, it says, tubular electrodes 34 and 36, for example? There are other places, as well. But in each case where it describes the electrodes it calls them electrodes. It doesn't call them, for example, a return electrode; correct?
A. No, it does not.
Q. Now, in the various embodiments of the '007 patent, would you agree that each f the electrodes in this configuration is designed in a way that it will have a high current density at the tip?

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A. No, I would not.
Q. All right. So just to be clear, your testimony is -- let me ask it specifically again, just so it is clear. Would you agree with me that each of the electrodes in the figures of the Doss patent is designed in a way that will have a high current density? Do you disagree with that?
A. When you say high, are you saying that both electrodes have high current densities. Is that your question?

- - -

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Q. Each of the electrodes is designed in a way that will have a high current density. That's the question.
A. I think the answer may be yes, but I think one of the electrodes will have a higher current density than the other.
Q. That's not my question, sir.
A. Okay. I understand.
Q. My question is in this patent, for each embodiment, in each of the figures, is each of the electrodes designed in a way that will have a high current density?
A. I'm not sure I agree with that.
Q. Well, you recall I asked you about the Doss patent at your deposition, don't you?
A. Yes.
Q. And you had reviewed and studied the Doss patent before the deposition; right?
A. Yes.
Q. And again, the Doss patent was a reference that you talked about in your report; correct?
A. Yes.
Q. All right. Now, if you would please turn to Page 481 of your deposition... That is in a white binder.
A. Which day?
Q. Pardon me?

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MR. BOBROW: Oh, no. Please don't.
I apologize, your Honor. I didn't know that was going to be put up.
THE COURT: Okay.
BY MR. BOBROW:
Q. This is in the second tab, Taylor deposition, March 28, 2003. And this is Page 481.
Do you have that sir?
A. Yes.
Q. And at Page 481, I asked you the following question and you gave the following answer.
"Question: If you look at the figures in text of the Doss '007, would you agree that each of the electrodes in the embodiments described is designed in a way that it will have a high current density?"
And in response to my question, you answered in your deposition:
"Answer: Yes."
Is that correct?
A. Yes.
Q. Now, in the devices in Doss, there are a number of them that are depicted; correct? Probably seven or eight figures; correct?
A. There are a number of figures, yes.
Q. And would you agree with me that in each of the

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embodiments, the current density of one of the electrodes is substantially the same as the current density of the other electrode or electrodes in that configuration?
MR. BOBROW: Why don't we put Figure 7 back up?
THE WITNESS: Can you -- are you going to put the figure back up?
BY MR. BOBROW:
Q. Well, actually, why don't you just answer the question, sir? Would you agree with me that each of the electrodes has substantially the same current density as the other electrode for any given one of the devices that is used or described in that patent?
A. I don't think that's correct.
Q. All right. Well, remember I talked to you about this in your deposition as well; correct?
A. Right.
Q. And you answered my question at that time under oath, didn't you?
A. Yes, and I think I misunderstood your question, but that's --
Q. All right. Well, we can get to that in just a minute. If you take a look, please, at Page 482 f your deposition.
Do you have that, sir?

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A. Yes, I do.
Q. And at that time, I asked you the following questions and you gave the following answer:
"Question: And in each of the embodiments shown, would you agree that the current density in each of the electrodes is substantially the same as each of the other electrodes in the embodiment?"
And there was an objection by Mr. MacFerrin and you gave the answer:
"Answer: Does that mean from one embodiment to another or just within the same embodiment?
"Question: Good question. Within the same embodiment is what I meant, that the electrodes had substantially the same current density?
"Answer: It would appear that that is correct."
That's the testimony you gave back on March 28th, 2003; correct?
A. That is testimony, and it is also a mistake.
Q. So you believe your testimony back then was mistaken; is that correct?
A. I made an error, yes.
Q. Did you correct that mistake?
A. No, I was under the impression I could not correct testimonial mistakes. I could only correct typographical

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errors or grammatical errors.
MR. BOBROW: Let's put Figure 7 up, okay?
BY MR. BOBROW:
Q. Now, here in this figure, this is the one you had up earlier; right?
A. Yes, it is.
Q. And there are here at the tip of the device some lines there. Do you see those?
A. Yes.
Q. Some dashed lines. And that's designed to represent a current flux line; correct?
A. The dashed lines represent current flux, yes.
Q. Right. And would you agree here that this is showing the current flux between these two electrodes; right?
A. Yes.
Q. All right. And would you also agree that each of the electrodes as shown here is designed to cause a tissue effect, in this case in the eye?
A. Well, that's sort of goes to the heart of why I think there is an error on my part.
Q. Well, but I would like you to answer my question, please?
A. Okay. Repeat your question. I'm sorry. Repeat your question.

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Q. Yes.
A. If you would, please.
Q. I was simply asking if each electrode in this probe design is designed to cause a tissue effect. That's my question.
MR. MARSDEN: Your Honor, objection. This goes to an issue that dealt with claim construction. An issue which your Honor made a ruling.
THE COURT: Well, why don't we take our lunch early because I have to think about that one.
All right. Ladies and gentlemen, we'll take our lunch, a half-hour, and I'll just remind you not to discuss the case among yourselves.
(At this point the jury then left the courtroom, and the following occurred without the presence of the jury.)
THE COURT: All right. You may step down, sir.
Let's have the question again and the objection.
MR. BOBROW: I believe that the question was simply whether each of the electrodes in the probe of the Roos patent is designed to cause a tissue effect. And I believe that that is quite relevant, your Honor, to the claim construction here and to whether or not this device discloses an active electrode and return electrode and that's where the testimony is going.

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MR. MARSDEN: Right, that is where the testimony is going. And they requested a claim construction that the return electrode could not have a tissue effect and your Honor rejected that construction, so that's not a basis on which to say this is not a return electrode. What your Honor ruled was that you look at the current density, so that line of questioning was appropriate, but the line of questioning regarding tissue effect is not.
MR. BOBROW: But I believe the construction does talk about the active electrode stimulating the tissue so that is where this goes. I'm asking him whether or not each of the electrodes has that tissue effect such that you would have tissue stimulation. It's directly relevant, your Honor.
THE COURT: So which claim construction are you talking about?
MR. BOBROW: This has to do with the definition of an active electrode and the return electrode. And the definition of active electrode involves tissue stimulation.
MR. MARSDEN: It's 8 and 9, your Honor.
MR. BOBROW: And so I'm simply trying to understand and get testimony from this witness about the tissue stimulation effects that the different electrodes have in this embodiment.

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THE COURT: All right. Well, certainly the definition of active electrode is a stimulating electrode, but the definition of a return electrode doesn't say stimulate, it just says it has a large area of contact to avoid a low current density. The only question is whether this, the question you are asking, is misleading because it is maybe inconsistent with what I've said.

MR. BOBROW: But, your Honor, respectfully, I am certainly trying not to be misleading. I believe we are entitled to argue to the jury -- pardon me. I believe that I should be allowed to argue to the jury. I request the opportunity to argue to the jury that both of these electrodes are active electrodes and that both of them have that tissue stimulation effect, that both of them have a high current density, that both of them have sharp edges and the like which would make them tissue treatment or tissue stimulation electrodes.

THE COURT: Well, if you are saying there is no difference between the two, I mean I do believe that under this definition there has to be a difference between the active and the return. If you are saying and your point is that in the Roos prior-art reference there is no difference between the two, then that is an appropriate line of cross.

MR. BOBROW: And that's what I'm trying to

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establish by the testimony that both of these have a tissue effect. I think you heard, your Honor, in the course of the testimony that, for example, the accused devices are designed in a way that the return electrode is very benign, that it doesn't arc, that it's not designed to remove tissue or what-have-you because of its size and otherwise.

And it's ArthroCare's position that both of these electrodes are active, that both of them have a tissue effect, have high current density and stimulate the tissue. That's where we're going with this. I believe it's a fair line of questioning.

MR. MARSDEN: The tissue effect is not part of the definition of return electrode, and I think the argument there is no return electrode in this particular prior-art reference and because it does, in fact, have a larger area of contact and a lower current density, it does meet the Court's definition of return electrode.

THE COURT: Well, that's argument.

MR. BOBROW: That's argument.

THE COURT: I think that is argument.

I'm working the jury instructions and verdict form. I apologize if I'm not keeping up to speed with you all, but I think it's a fair line of questioning. All right.

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MR. MARSDEN: Thank you.

THE COURT: Should we address the other issue?

MR. HEBERT: It's an issue Mr. Blumenfeld has.

THE COURT: Why don't we do that.

MR. BLUMENFELD: Your Honor, it's an issue I raised this morning that Smith & Nephew advised us last night that they intend to use with Mr. Raffle this afternoon, the Ethicon license agreement and their antitrust counterclaim. And when I asked Mr. Hebert this morning in the hall whether he still intended to do that, he said yes, because I had opened the door to that on my cross-examination of Mr. Sparks. If I opened the door on the Ethicon license and the antitrust counterclaim, I missed it, and I guess it's to Mr. Hebert to explain how I did that.

THE COURT: And what relevance it has in the first instance.

MR. HEBERT: What this goes to, this is raised in one of the motions in limine and ArthroCare moved in limine to keep out evidence of the antitrust issues. Your Honor conditionally granted that and said -- this is Item No. 7 in motions in limine. It was granted so long as ArthroCare does not introduce evidence regarding the Ethicon license. And then the ruling goes on to deal with the issue about the harmful effects which are talked about

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here.

And Mr. Blumenfeld did get into this in cross-examination of Mr. Sparks when he is asking him about a Smith & Nephew document which talks about competition and he directs him to that and he directs him to the portion that discusses that Mitek and Stryker -- now, Mitek is a division of Ethicon, so when it talks about Mitek, there is no dispute about this, it's talking about Ethicon as well. It's one and the same -- are paying royalties in return for licensing the ArthroCare patents.

So that is what he was asking Mr. Sparks about in his cross-examination. He was asking him if he knew about the ArthroCare patents that were being discussed in regard to that licensing point and document.

MR. BLUMENFELD: Your Honor, I have a transcript. What I asked him, this is the question:

"Question: Under exceptive, at the top, if you can highlight, in that section there is a reference to, right in the middle, to key ArthroCare patents and I highlighted the three words 'key ArthroCare patents.' Do you see? It's the third line down.

"Answer: In that secti n?

"Question: At the top of the page.

"Answer: Right. I have got it.

"Question: Do you know what key ArthroCare

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patents were, what key ArthroCare patents were that Smith & Nephew was referring to?"

That was my question and it had n thing to do with licenses. I didn't ask about licenses. I haven't asked anyone about licenses.

MR. HEBERT: But at the same time he asked the question, he broadcast the marketing plan and highlighted the portion of the marketing plan that talks about the Mitek and Stryker paying royalties to ArthroCare in terms of the licensing.

So that would be what we say would open the door.

THE COURT: And what is the relevance of this evidence in the first place, given the fact you have so little time to present evidence in the second place?

MR. HEBERT: To undercut any suggestion that the patents are strong because they're licensed. They're licensed because of this very unusual relationship that ArthroCare and Ethicon have entered into which gives rise to the antitrust claim as opposed to any strength in the patents.

It would only be a couple questions, two or three questions.

THE COURT: Yes, but it's such a subtle point. I don't believe that it's appropriate.

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All right. Let's take some time.

MS. BOYD: Your Honor, we would like to read an Interrogatory response sometime before closing our case, Interrogatory Response No. 7. We have an agreement, I believe, from the other side.

THE COURT: Interrogatory Response No. 7?

MR. BOBROW: No objection.

THE COURT: All right.

MS. BOYD: Thank you.

(Luncheon recess taken at 1:10 p.m.)

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AFTERNOON SESSION

(Proceedings resumed at 1:30 p.m.)

THE COURT: All right. Let's bring the jury in.

(At this point the jury entered the courtroom and took their seats in the box.)

THE COURT: Mr. Bobrow.

MR. BOBROW: Thank you, your Honor. Good afternoon, ladies and gentlemen.

BY MR. BOBROW:

Q. Good afternoon, Dr. Taylor.

A. Good afternoon.

Q. I believe that at the close of our session before lunch, I had asked you a question, and there was an objection to that. I think that issue has now been resolved.

Let me go back to that question. We were talking about the Doss '007 patent; correct?

A. Correct.

Q. And I had asked you some questions, for example, about Figure 7 of the Doss '007 patent. Do you recall, that was the context for our discussion?

A. Yes.

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Q. And I asked you a question before lunch, and this is the question I would now like you to answer: Is it true that in the Doss '007 patent, that each electrode in each of the probes is designed to cause a tissue effect, in this particular case in the tissue of the eye?

A. Would you mind putting back the figures, the two figures?

Thank you.

Q. So again, my question, sir, simply is, is each electrode designed to cause a tissue effect?

A. Yes.

Q. Now, in this figure, we had talked about these current flux lines before lunch.

Do you recall that?

A. Yes.

Q. And here -- and it's probably hard, given how shaky I am with my pointer -- do you see that number 102?

A. Yes.

Q. And there is a region here right underneath this electrode where it appears that the current flux lines are not shown. Do you see that? Right in this region here. Just above 102, it appears it is not showing a current flux line in that region; correct?

A. That's correct, yes.

Q. Instead it is showing these flux lines going out

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this way, from here in this case the right to the left, and here from the left to the right.
Do you see what I am talking about there?
A. Yes.
Q. Now, imagine, if you would, instead of pointing down in this fashion, you sort of looked at it end on and you looked at those current lines end on. Do you have that in mind now?
A. Yes.
Q. And if the current lines were as they are depicted here, going from this electrode to here and from this electrode to here, essentially, those current flux lines would look sort of like a donut; right?
In other words, you have a hole in the middle, where there weren't current flux lines, then you would have some current flux lines in sort of a donut shape. Is that fair?
A. Yes. I am not sure exactly how the donut would look. It might not look like a regular donut we are familiar with. A toroid of some sort.
Q. And a toroid is basically just a ring; correct?
A. It's a three-dimensional ring, yes.
Q. It is sort of like a washer that you might use with a nut and a bolt; it's got a hole in the middle and there is sort of a ring with some mass around it?

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A. That's right. It's sort of a Thalman (phonetic) washer.
Q. Why don't we take a look, then, at the Doss007 patent. Specifically Column 5?
A. Which one is that again?
Q. The DTX number is 17.
A. 17.
Q. Okay. Do you have that, sir?
A. Which one was it again?
Q. Column 5. The paragraph that I have interest in, actually, starts around Line 27. It begins, Figures7 and 8.
MR. BOBROW: Chris, do you have that?
THE WITNESS: Okay, I see it.
BY MR. BOBROW:
Q. All right. And here, this part of the Doss ' 007 patent is talking about the figure that you had up in direct examination and the figure, in fact, that we just had up and were talking about with these donut or toroid-shaped lines; correct?
A. That's correct.
Q. If you take a look at about Line 43, there is a sentence that says, quote, An advantage of this particular electrode configuration is that a ring or torus-shaped treatment region can be realized, since electric current

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flows essentially in a torus-shaped volume under and between electrodes 72 and 74.
Do you see what I am referring to there?
A. Yes.
Q. Now, when it is referring there to a torus-shaped volume, that is referring to the volume of tissue that is being treated in this case by the electrosurgical energy of this device; right?
A. That's what it would imply, yes.
Q. And the Doss patent is generally describing an electrosurgical device that is designed to use this current to provide some heating within the corneal and other tissues of the eye; correct? It is supposed to provide some deep heating, essentially?
A. Heating. I am not sure I would characterize it as deep. It is designed to shape the cornea.
Q. So what this is saying then -- if we could back to Figure 7 -- is that both of these electrodes here, which it describes as electrodes 72 and 74, in each of these regions, one to the left and one to the right, you will have as a result of the current flow between those electrodes a region of tissue that has been warmed or heated and thereby treated within the eye, in this torus shaped fashion; is that right?
A. Correct.

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Q. Now, on the direct examination, you had said that this Doss patent anticipates Claim 45 and -- and the dependent claims with respect to the '536 patent; correct?
A. Yes.
Q. And one of the limitations of Claim 45 of the '536 patent, and thus a limitation in all of the claims that depend from it, is the limitation that provides that you have a connector near the proximal end of the shaft.
Do you recall that?
A. Right.
Q. And the proximal end of the shaft is sort of the back part of the shaft, not the tip of the device that you would be inserting in towards the tissue treatment area, but removed from that towards the back; correct?
A. Yes.
Q. And here in the Doss '007 patent, would you agree with me that there is no disclosure of where the conneetor is located, in other words, there is nothing that tells you where the connector is located with respect to the shaft?
A. Hold on a second.
I believe that's correct. There is no specific mention of the location of that.
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Q. Okay. Now, you had also mentioned that you believe that the Doss '007 patent anticipated some of the claims of the '592 patent.
Do you recall that?
A. Yes.
Q. And I think that one of those claims was Claim 21 of the '592, which talks about a voltage in the range of from 500 volts to 1400 volts peak to peak; is that right?
A. Yes, that's the language I remember. Yes.
Q. And it's your testimony that the Doss '007 patent necessarily discloses a voltage in the range of 500 volts peak to peak. Is that true?
A. I think it does disclose that range, yes.
Q. And the portion of the patent you base that testimony on was a passage at the very beginning of the text of the patent that talks about the voltage being between about 20 and 200 volts RMS; correct?
A. That's correct.
Q. What did you when you did your calculation to go from an RMS -- that stands for roots means square, does it not?
A. Sure does.
Q. So to go from the root means square voltage to the peak to peak voltage, you multiply the 200 that is set

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forth in the page by 2.83 and that gets your north someplace of about 568 volt peaks to peak; right?
A. Roughly.
Q. Now, in terms of calculating the peak to peak voltage, isn't you true that you need to know the waveform that the generator is producing?
A. Yes, you do.
Q. You need to know whether it's a sine wave, whether it's a square wave or some other waveform; is that correct?
A. That's correct.
Q. And there is nothing in the Doss patent that says that a sine wave is used with this generator; correct?
A. That's correct.
Q. So we don't know whether there is a sine wave here or a square wave or some other waveform; right?
A. You're correct. But, to my knowledge, there are no commercially-available square wave generators.
Q. But you don't know what Mr. Doss may have been working with in his lab or what you have when he was writing this application, do you?
A. No.
Q. And whether it's commercially available or not isn't the test, is it?
A. No, it's not the test.
Q. All right.

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A. However, it could be used with a sine wave generator.
Q. But it could be used with a square wave generator?
A. Could be.
Q. And square wave generators are known in the electrosurgical art, aren't they?
A. They are but not necessarily practiced.
Q. In fact, one of the references, the Slager reference actually used a square wave generator?
A. Yes, it did.
Q. That was in the electrosurgical context; right?
A. Yes.
Q. So in terms of what is actually disclosed in the Doss patent, we don't know whether it was a sine wave or a square wave or something else. True?
A. True.
Q. Now, if you are calculating the peak-to-peak voltage from the root-means-square voltage, if the waveform in Doss were a square wave, when you go from 200 volts RMS to peak to peak, that's 400, isn't it?
A. Actually, if you actually use the correct formula of the root-means-square calculation, which it's an integrations calculus, it depends whether or not the period of the square wave is equal.
But if you make the assumption -- let me

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finish -- if you make the assumption that is an equal period, I think that formula is correct. But, frankly, I haven't done the math.
Q. Okay. But it's your best understanding here that if you have a square wave where the waveform is symmetric and you go from RMS to peak to peak and it's a square wave, then the Doss patent would be disclosing approximately 400 volts peak volts peak to peak; right?
A. Yes, according to your formula. Now, like I'd said, I haven't done the math, but I'll presume that you have and that you're correct.
Q. Now, you have a background in electrical engineering; is that right?
A. Yes.
Q. Now, let me ask you now a few questions about the Pao '499 patent. And this was another patent that you discussed this morning on your direct examination with respect to the '536 patent.
Do you have that, sir?
A. Yes, I have it.
Q. Now, the Pao patent, '499 patent, which is DTX-21, this was one of the patents that was also in front of the Patent Office during the prosecution of the '536 patent; correct?
MR. BOBROW: Why don't we call that up, Chris?

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THE WITNESS: Yes.
BY MR. BOBROW:
Q. All right. And if you take a look down there maybe ten items down, you see 4,674,499, Pao?
A. Yes.
Q. And that's DTX-21?
A. Yes, it is.
Q. And this same patent also was before the Patent Office in connection with the re-examination -- is that right -- of the '536 patent?
A. I believe so, yes.
Q. And with respect to the '536 patent, of course, the Patent Office granted ArthroCare's '536 patent over the Pao '499 patent; right?
A. Yes. And that's probably one of the reasons why we're here today.
Q. Now, as far as the Pao patent, I believe that you had shown earlier a couple of figures from the Pao patent. Why don't we pull up in the patent the figure that I think you had up, which I think was Figure 9.
MR. BOBROW: Can you call that up, please, Chris?
And why don't you highlight Figure 9 on that page?

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BY MR. BOBROW:
Q. All right. And is that the figure, sir, obviously with colors added that you were using during your direct examination?
A. It was one of the figures, yes.
Q. And actually, the Pao '499 patent describes a number of different device configurations, doesn't it?
A. It does.
Q. And it looks like there are 12, 13, 14, some odd number of figures. There is a fair number. But would you agree with me, sir, that the instruments that are described here in the Pao patent all have what is called a coaxial configuration?
A. In terms of the electrode configuration?
Q. Yes.
A. Yes.
Q. By coaxial, we know they're saying out certain tube and within that tube is another one of the electrodes; correct?
A. That's correct.
Q. So the uter electrode serves -- I'm sorry -- the outer tube served as an electrode and the inner one does as well?
A. Yes.
Q. And we call that coaxial in the electrosurgical area;

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correct?
A. Yes.
Q. If you would, please, let's take a look at Column 9 of the '499 patent and specifically there is a paragraph that begins about Line 48 and runs down to about 63.
MR. BOBROW: Chris, if you could highlight that, please...
BY MR. BOBROW:
Q. All right. And we have the text up. I'm sorry, sir. Do you have that page?
A. I'm sorry. You said Column 8 or 9?
Q. 9, I believe, is where we are. And we're at --
A. Oh, yes. Okay. I'm sorry.
Q. No problem. So that paragraph begins, quote, The coaxial bipolar probes of the present invention are used generally as follows.
Do you see what I'm referring to there?
A. Yes.
Q. And so what is being described here is the use of the various probes, and there are a number of them, but the various probes are coaxial in this patent; right?
A. Yes.
Q. And as you move down in this paragraph, about Line 58, there is a sentence that says, quote, The end of the probe region is placed against the tissue causing the

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first ends of the axial and outer electrodes respectively to come into contact with the tissue. Electrical current then flows through the tissue between the axial and outer electrodes.
Do you see that, sir?
A. Yes.
Q. Now, here in this passage, when it is talking about the, first of all, the axial electrode, that's talking about the active electrode; is that right?
A. Yes.
Q. And we're referring here to the outer electrodes. In your view, that would be the reference to the return electrode here. The outer one of the electrodes in this coaxial configuration; is that right?
A. That's my view, yes.
Q. And here in this text, where it's describing the operation of the coaxial probes, it says that, in effect, then the axial and the outer electrodes come into contact with the tissue; right?
A. Yes.
Q. And so, if you're interpreting the outer electrodes as being a return, that means there the return electrode as described in this paragraph is in contact with the tissue; right?
A. Yes. And this is one description how it could be

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used, but there are other descriptions where the outer electrode and return electrode does not contact tissue.
Q. We can come to that; but here, this is actually describing how these are devices are used. That's up at Line 48. It says are used generally as follows; right?
A. But it doesn't say exclusively used, but it does say used generally as follows.
Q. And the way it's generally used is with both electrodes contacting the tissue?
A. I'm not sure I would go there, but that's -- that is one way of it being used.
Q. All right. And then it says the electrical current then flows through the tissue between the axial and the outer electrodes; right?
A. Yes.
Q. And it says it then flows immediately after saying that both the active and the return are in contact with the tissue; correct?
A. In this description of its use, yes.
Q. So in this description of its use, what it's essentially saying is that you put the active and the return in contact with tissue and then the current then will flow between those two electrodes through the tissue; right?
A. And this is one way, yes. The answer to your

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question is yes, and this is one way you use the device. It's not the only way.
Q. All right. Now let's take a look, if we might, at Column 3 of the same patent.
And if you look at Column 3 at about Line 11, going to about Line 15...
Do you see what I'm referring to?
A. Does that start with, The probe region?
Q. Yes, The probe region.
Do you see that?
A. Yes.
Q. And the probe region in these devices is talking about the end of the devices, right, where the active and return electrodes are?
A. I think in this particular patent, they're actually referring to the entire probe. So the entire metallic part of the shaft going from the distal end up to where the handle spot is.
I think that's what they mean, but I could be wrong.
Q. But around Lines 11 to 15, there is, once again, a reference to tissue contact being made.
Do you see what I'm referring to there?
A. Lines 11 to --
Q. About Line 15.

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A. Yes.
Q. And now if we go over to Column 8, at about Line 53, there is a discussion there about Figure 12.
A. What column? What line?
Q. Column 8, Line 53 going down to about 60.
And perhaps -- do you have that language, sir?
A. The preferred probe? That one? Yes.
Q. Right. And here in the description of Figure 12, it talks about inserting the probe through a small limbal incision in the cornea and that it's placed in firm contact with the nucleus 300, as shown in Figure 12.
Do you see that?
A. Yes.
Can I look at the figure for a second?
Q. Yes?
MR. BOBROW: Why don't we put Figure 12 up, please?
BY MR. BOBROW:
Q. Now, Figure 12 is a diagram of the human eye; right?
A. Well, yes. Part of it, yes.
Q. Sure. And over here, from, going from right to left, that's the probe; right?
A. Right.
Q. And here, this circle labeled 300, what is that?
A. That's the nucleus of the eye -- nucleus of the lens,

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I should say.
Q. Okay. And this device is shown to be inserted within the volume of the eye. Is that true?
A. Yes.
Q. What is the nucleus made of?
A. I can't tell you the exact tissue description, but it's tissue, probably collagen and some other stuff.
Q. So the nucleus of the eye is a form of tissue; correct?
A. Yes.
Q. And tip of this probe here, the reason it's shown in a dashed phantom way like that is because it's being inserted into a solid object; right?
A. Yes.
Q. And that solid object in this case is tissue?
A. Yes.
Q. Now, let me turn, if I might, to another reference that you had talked about a bit earlier today, which is the Slager reference, which is DTX-65.
A. I have it.
Q. Do you have that, sir?
A. Yes.
Q. And I believe that earlier today you had testified that various claims of the '882 patent and the '592 patent were anticipated by the Slager reference; is that

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correct?
A. Yes, I did.
Q. Okay. And you didn't say that Slager was relevant to the '536, but that it was relevant to '882 and to '592?
A. That's correct, yes.
Q. Now, in the Slager article, there are two tests that are being described here; right? One being done in vitro and one being done essentially in vivo in a pig; is that right?
A. Yes.

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Q. And the portions of this article that you were saying were relevant to the '882 and the '592 patent related to the in-vitro test; correct? Not to the test on the pig?
A. You said the in-vitro test?
Q. I did.
A. Yes.
Q. Okay. The in vitro means what in this article?
A. In vitro means it's outside the body, generally in a dish preparation of some sort. I guess it's the opposite of in vivo, which is inside the body.
Q. So the tests that were being done here, when they described the tests as being in vitro, those are outside a patient's body; correct?
A. Outside anybody's body, any animal's body.
Q. Or human being?
A. Well, I hope animals.
Q. Fair enough. For the context that brings us here, what is being described here as in vitro is something that is not done in a living human patient; correct?
A. That's correct.
Q. Instead it is typically done in some sort of dish, bowl, in a laboratory; right?
A. In some preparation or another, yes, a dish.
Q. What is being described here in the Slager article

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is that some pieces of aortic tissue from an aorta, from a cadaver were taken and were put into some sort of a dish; correct?
A. Yes.
Q. Then I think that you mentioned earlier that there was some saline that was administered and then put into that same dish; correct?
A. Yes.
Q. Now, there is no indication, is there, as to how the saline got into the dish; right?
A. Well, it has to be poured in. It doesn't just magically appear. It is not specifically said in the article that somebody poured in or delivered to the dish the saline.
Q. And certainly, there is nothing in here that says that the fluid was supplied to the dish through the electrode that was put in contact with the tissue; right?
A. That's correct.
Q. And in terms of describing the setup for this Slager reference, where you have a dish, you have some tissue in the dish, you have some fluid that somehow got there, and then you have an electrode that gets put onto the tissue, then you apply energy, supply it from a generator, you would agree with me, wouldn't you, that that is describing an electrosurgical system?

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A. I am sorry. Can you repeat the question?
Q. Sure. What I am asking, sir, is in this experiment, where you have a dish, you have some tissue in the dish, you have saline that has been put into the dish, you bring an electrode in contact with the tissue, and you apply energy in a generator, that is describing an electrosurgical system. True?
A. Yes.
Q. And it's describing an electrosurgical system even though we don't have any idea how the fluid got into the dish; correct?
A. That's right.
Q. And it's an electrosurgical system even though the fluid didn't come in through the electrode that is described here in Slager; correct?
A. Yes.
Q. Now, in this Slager patent -- I am sorry, it is not a patent, it is a paper. In the Slager paper, there is another experiment that is described as we had mentioned that is in a -- that was done in a pig; correct?
A. Yes.
Q. And they call that the in vivo test; right?
A. Yes.
Q. And in that particular test, the article says that there was a subcutaneous needle, ten centimeters long,

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Q. Yes.
A. Most likely you would, yes.
Q. Now, you also had menti ned that the Slager article talks about suction. I think this was in reference to Claim 54 of the '882 patent that has in it this requirement that there be evacuation of fluid; correct?
A. Yes.
Q. And if you take a look at the last page of the article, the second paragraph down, over on the left-hand side, it says one of the areas deserving further attention.
Do you see that?
A. Yes, I do.
Q. And in this part of the article, it is talking about bubbles being generated when this device is used; right?
A. Yes.
Q. And so it says that one could look into using a, quote, suction technique, do you see that, to solve the problem of the bubbles; right?
A. Yes.
Q. And in terms of this suction technique, the suction technique that is described here, it doesn't say where the suction lumen would be that is performing the suction; right?
A. It does not.
Q. It doesn't even say what it is that is going to be

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used to suck away the bubbles, does it?
A. No.
Q. So we don't know from this description whether the suction would be taking place through a lumen that is adjacent to an electrode, do we?
A. No, we don't.
Q. Now, I had some questions for you, also, about the Manwaring patent. Actually, let's stay on Slager for just a minute, because I think I forgot to ask you a question. To do that, I think I am going to need to put up one of the claims from the '592 patent. Here at the very top, we have Claim 23, and this says a method for applying electrical energy to a target site on the body structure that is on or within a patient's body.
Do you see that?
A. Yes.
Q. And it looks like that box over there was checked in black, do you see what I am referring to?
A. Yes.
Q. Now, would you agree with me that in the Slager article, in the in vitro test we were talking about, the energy was being applied to aortic tissue that had been taken from a cadaver a couple of days before; is that right?
A. I am not sure about the time. It was taken from a

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cadaver.
Q. And the energy wasn't being applied to a patient, was it?
A. Well, from the perspective of a patient being referred to as someone that is alive, that's correct.
Q. And so in terms of the tissue, there was a cadaver, the tissue was taken from the cadaver, placed into a dish; right? And then energy was applied to it there. It wasn't on an animal or a human being or what-have-you at the time; right?
A. Right, yes. The tissue was not living tissue. It was human tissue, but it wasn't living tissue.
Q. It wasn't living tissue and it wasn't on the patient's body when the energy was applied; correct?
A. That's true. The reason I am hesitating is, the aorta is part of your body.
Q. I am not saying it's not tissue. My question is, when the energy was applied, it wasn't on a patient's body. Is that true?
A. That's true.
Q. Now let's take a look at the '882 patent. You had mentioned that the Slager article is also relevant to Claim 1 of the '882 patent; right?
A. Yes.
Q. And again here, we have the Slager article has a

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checkmark by it next to this language from Claim 1; correct?
A. Yes.
Q. And the language there is a method for applying energy to a target site on a patient body structure comprising.
Do you see that?
A. Yes.
Q. And once again, the tissue to which the energy was applied in the Slager article was no longer part of a living human being; correct?
A. Correct.
Q. The tissue at that point in time was dead; right?
A. Correct.
Q. And so there wasn't any application of energy to a patient, was there?
A. No.
Q. Did you hear Mr. Marsden's opening statement?
A. Yes. But that's been some time ago.
Q. But do you recall that Mr. Marsden was suggesting that Smith & Nephew didn't infringe the method claims itself because it was in the business of making and selling these devices, not using them; correct?
A. That's correct.
Q. And not using them on patients; right?

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A. That's correct.
Q. And so he was saying that they didn't, Smith & Nephew didn't infringe these method claims because they didn't perform the surgeries themselves on patients' bodies; right?
A. That's correct.
Q. Would you agree with him that if you are not using the device on a patient's body, that you are not infringing Claim 1 of the '882 patent or the method claims of the '592 patent?
A. Yes.
Q. Now, since we have the '882 up, let me ask you some questions about the Manwaring reference. This is the '138 patent. And I apologize, sir, I believe that's DTX-46.
A. I have it.
Q. Now, as far as the Manwaring patent goes, once again, in connection with your work as an expert in this matter, when you prepared your expert report, you didn't perform tests using the Manwaring device to see whether or not it emitted photons in the ultraviolet light; correct?
A. That's correct.
Q. Now, when you were analyzing the Saphyre bipolar ablation probes, I take it that you also didn't do a test

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back at that time to determine whether or not those emitted UV light, either, did you?
A. When you say analyzing, are we talking about the experiments I did?
Q. Your use of the device prior to the time you submitted your expert report, you didn't look at whether those devices did or didn't emit ultraviolet photon either. Is that true?
A. That's correct, yes.
Q. Now, taking a look here at the Manwaring '138 patent, why don't we pull up Figure 5?

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Q. (Continuing) And Figure 5 is a closeup of the tip of the Manwaring device; correct?
A. Yes.
Q. And there is a little region there that, here, where the tip, it says it's in a fluid-filled medium; is that right?
A. Yes.
Q. And then here, Item 36, we have the tip of an electrode; correct?
A. Yes.
Q. And then over here, it says tissue over to the right-hand side; correct?
A. Yes.
Q. Now, in column 7 of this patent, there is a discussion about using an embodiment of this device where fluid is not delivered through the device to the tissue; correct?
That's at Column 7 around Line 19?
A. Oh. Column 7 says -- okay. Column 7, Line 19.
Q. Right. That says if the source of pressurized fluid as illustrated in Figure 2 were omitted; correct?
A. Yes.
Q. Now we're talking about fluid not being delivered to the region of the body that is being treated here;

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right? We're not affirmatively delivering the fluid?
A. That's right.
Q. And so it says for this device to work, you need to essentially suck some of the fluid, it might be the cerebral spinal fluid, that's in the working field into the tip of the device; correct?
A. Yes.
Q. And when you suck that fluid into the tip of the device, that fluid is going to be in the vicinity of the tip of the electrode.
MR. BOBROW: If we can put up Figure 5 again...
BY MR. BOBROW:
Q. Right. So here we have Figure 5, and if some fluid is drawn in, the fluid is going to be in this region here, right next to this No. 36 of the probe; right?
A. Yes.
Q. And the fluid that is going to be brought into the tip of that tube is going to be in the vicinity of the tissue, if that you are trying to treat this tissue here that is shown here in Figure 5; right?
A. Yes. But presumably it could also be from areas that are outside f that specific location.
Q. Right. But you are not going to take the fluid from this region at the tip and suck all f the fluid way over here, way up into the device and leave no fluid down

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at the tip, are you? You're going to suck fluid in, so that electrode tip has some fluid in contact with it; right?
A. Oh, yes.
Q. And that fluid that you suck in, there is going to be some fluid right there at the tip of the device and right there on the tissue and you are going to apply energy to that; right?
A. Let me see if I understand what you are saying. Are you saying there will be fluid inside this space here?
Q. Yes.
A. Is that what you are saying?
Q. At the very tip of the device, when you suck some of the fluid in, you will have fluid at the very tip of the device?
A. Yes.
Q. And then you will apply some energy to that; right?
A. Yes, when you operate the device. Yes.
Q. Right. And then when you apply the energy, you get sparking; right?
A. Yes.
Q. And then what this patent tells you is that you get the sparking and that sparking then leads to the vaporization of the fluid; correct?
A. In this particular -- yes. Yes.

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Q. All right. Now, you had mentioned before that you had some question, and I think it was your opinion that if this claim, the '882 patent, if it's valid, then you had, it was your opinion that it wasn't enabled; right? I think you offered that opinion this morning on your direct examination? Or did I get that wrong?
A. Without getting into the legal terms here, if that patent is valid, it applies to a lot of other devices that are process devices.
Q. Okay. Now, in connection with your work on this matter, how many hours have you spent on this matter up through today?
A. Up through today?
Q. Sure.
A. It's between three and four hundred.
Q. And all of those three and four hundred hours were compensated at $150 an hour?
A. That's correct.
Q. And you've been paid by Smith & Nephew for your work; is that correct?
A. That's correct.
Q. Now, in connection with your three and four hundred hours f work you spent on this matter, did you attempt to build a device that would embody Claim 1 of the '882 patent? Did you try to build it?

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A. Since the Codman ME 2 device essentially practices Dr. Manwaring's patent, I didn't have to. I could buy one.
Q. But you didn't buy one?
A. No.
Q. So I'm asking you, sir, whether you built one?
A. Oh. No.
Q. Okay. You didn't try to build a device that -- using the specification and the like, try to build a device that would be consistent with the teachings of the patent? That's all I'm asking.
A. Yes, but let me be clear. We're talking about building a device that would practice the corrected Claim 1?
Q. Good question. The answer is yes. Did you attempt to build the device that would practice the corrected Claim 1 at the time you were doing your work, on your expert report? Did you build such a device?
A. No. Because I already developed devices that meet that.
Q. But you didn't try to build one yourself?
A. I got one sitting on my shelf on my bookcase at home.
Q. You didn't build one, sir? Could you answer the question?
THE COURT: Please just answer the question.

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THE WITNESS: No, I did not.
I thought I already answered the question.
BY MR. BOBROW:
Q. So now, as far as the teachings of the '882 patent go, would you agree with me there is a discussion in the '882 patent of some of the preferred ways of trying to practice Claim 1 of the '882 patent?
A. Yes.
Q. Would you agree with me there are preferred voltage ranges that are set forth?
A. Do you mind if I go back to the patent?
Q. Please.
A. Yes.
Q. And in addition to preferred voltage ranges, there are preferred materials with instruction for the electrode; correct? The active electrode?
A. Yes.
Q. If you take a look, sir, at the bottom of Column 16?
A. I found it, yes.
Q. And it says, it refers to metals like titanium and platinum.
Do you see that?
A. Yes.
Q. And this also gives preferred frequencies; correct?
A. Yes, it does.

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Q. And that's at Column 13; right?
A. Yes.
Q. And the voltage range, the preferred ones are also set forth in Column 13, aren't they?
A. Yes.
Q. There is also a preferred fluid that is supplied and that's in Column 12, right, at around Line 38.
A. Yes.
Q. And it also provides preferred power levels; right?
A. Can you direct me there so I don't --
Q. I can. I'm sorry. This is at the top of Column 14. There is a range preferred power levels.
A. Yes.
Q. And also there are preferred contact surface area values for the active electrode in Column 15; right?
A. Yes.
Q. And there are preferred distances from the tissue that are set forth at the bottom of Column 15; right?
A. Yes.
Q. Now, in connection with your work in this field of electrosurgery, I think you testified that you had a couple of patents that had issued to you. I think you said five?
A. Five total, two in electrosurgery.
Q. And in connection with the patents that you have

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been involved in writing, I take it it's true that when you were writing those patents, you would say what you believe to be a preferred way of practicing the inventions that you had come up with, right?
A. That's correct.
Q. And did you that so that could give some guidance to people who were reading the patent once the patent expired how to duplicate the device; right?
A. Right.
Q. And it's your expectation, isn't it, that a person of skill in the art in looking at a patent would look at what the patent itself, the preferred ranges, the preferred materials, the preferred voltages and the rest to try to figure out how to practice the invention; correct?
A. I would expect they would use that as their starting point, yes.
Q. Now, sir, I heard your testimony earlier and you had mentioned that you had actually used some of the accused products at the Smith & Nephew, I think it's called a bioskills lab; is that right?
A. Yes.
Q. And where is that? That's in Massachusetts?
A. Yes, Massachusetts. Mansfield.
Q. And you went out to that facility and had a chance to use the accused -- the products, the use of which use

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infringes the patents; correct?
A. Yes, the accused products. Yes.
Q. Fair enough. And in terms of the use of that, you were being assisted in your use by a laboratory manager; correct?
A. Yes.
Q. There was somebody from there from Smith & Nephew who was assisting you with the setup of the experiment and the operation of the devices; correct?
A. That's correct.
Q. And you had a chance to use, at a very minimum, the Saphyre; correct?
A. I used all three products, but I did use the Saphyre.
Q. And when did you these tests, there were recordings made of what was going on inside of this cadaver shoulder where the experiments were taking place; right?
A. That's correct.
Q. And that was done through some sort of a scope; correct?
A. Well --
Q. There was a little video camera?
A. Yes. There was a little video camera that was attached to the scope and that did the recording.
Q. When you did the recordings, those were actually permanently recorded onto a CD; correct?

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A. Yes.
Q. And you ended up saving that data and producing it in connection with this case; correct?
A. Yes.
Q. And in forming your opinion about how the devices work, you actually considered that information in determining whether or not there was or wasn't infringement by the accused products; right?
A. Yes.
MR. BOBROW: May I approach, your Honor?
THE COURT: Yes, you may.
BY MR. BOBROW:
Q. I'm simply showing you, and I know you can't look inside of a CD, so I apologize in advance, but there was a CD that was produced to us with this production number SN10765. It's since been labeled PX-104 and it was represented to us that this was a set of recordings of some of the work that you did on the cadaver. I'll simply have to make that representation to you because I obviously can't show it to you unless we put it up on the screen.
MR. BOBROW: I would move this CD into evidence.
MR. MARSDEN: Your Honor, we'll object to its being moved into evidence. If he intends to use it for impeachment, that is one matter, but it's not appropriate to move into evidence with our expert witness.

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THE COURT: Well, I'm not sure about that, but the problem is we don't generally -- this is, the exhibit is a test that the witness performed?

MR. BOBROW: That's correct.

THE COURT: I guess my problem is if this witness isn't the kind of witness who typically uses these products, I'm not sure what the relevance is or if the relevance is not waived by prejudice -- without knowing what this is, I'm not sure what why it should come in.

Maybe we should have a sidebar.

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(Sidebar conference, out of the hearing of the jury, as follows.)

MR. BOBROW: This is a videotape that this witness took so that he could understand how the devices operate. And it records that. He was being assisted by somebody from Smith & Nephew at the time and so, given that, what I would like to be able to show just one clip that he used to show how he used the device and how he operated it and how the device functioned inside of the tissue.

Now, Dr. Choti was allowed on his direct examination to show tapes of the ones that he actually prepared. He is not an arthroscopic surgeon either, but what it does, it gives the jury a good sense of what the

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shoulder space is like and how the devices fit inside the shoulder.

THE COURT: Well, is this for -- I can't remember whether those were introduced. What is the relevance? Illuminate me here.

MR. BOBROW: What I want to try to show, the devices can be used and are designed in a way such that the return electrode doesn't need to be contacting the tissue while it's inside the patient's body. So here I want to show one clip where there are times when it's not in contact and essentially he was able to observe there are times when it was not in contact.

THE COURT: Tell me something. All the clips we've seen for purposes of infringement, were those actual surgeries or were those just people playing with them?

MR. BOBROW: Well, we have seen two types. We saw Dr. Choti, and that was inside of a cadaver. And then we've also seen some that were actually on live patients where there was blood present. So that was either on an animal or that was on a human being, but something where blood was flowing. There is no blood flowing here.

THE COURT: Let's hear about Dr. Choti's clips, because I can't remember which ones those are.

MR. MARSDEN: Your Honor, I was trying to get assistance on that myself. I'm not sure that I was in the

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courtroom when it was played, but apparently he did play some tapes of tests.

MS. MacFERRIN: He did not play any on direct, but on cross played the tape of the experiment.

MR. BOBROW: There was a Control RF experiment from Dr. Choti that your Honor allowed to be played on cross-examination to show how the Control RF device interfaced with the tissue, its relationship to the tissue was, and this is an identical situation except it's this witness and a different product.

THE COURT: And whose witness was Dr. Choti? I can't even remember.

MR. BOBROW: Dr. Choti was an expert for Smith & Nephew.

MR. MARSDEN: So apparently on cross there, they used one of his clips.

MR. BOBROW: That's right.

MR. MARSDEN: I don't know that that makes it right to do it again. I don't think it's particularly helpful, particularly if you have a selected clip. There is a lot of other clips.

MR. BOBROW: I apologize.

MR. MARSDEN: The jury has seen it in use or in sales videos, which is an important consideration for whether there is infringement. That's how we tell doctors

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how it should be used. That's how we tell salespeople to show doctors how it should be used. And that would be the relevance.

MR. BOBROW: If I may make one more comment...

Dr. Choti testified that, on his direct examination, the shoulder, the cadaver was actually very much akin to a living shoulder. In other words, that it hasn't been obliterated, that it hasn't been damaged, but it was very much like a regular human shoulder. So I'd like to show this to show indeed there are lots of spaces in the shoulder where there are lots of room and that a surgeon can manipulate the device in a way and a person can manipulate the person in a way such that the return doesn't contact.

MR. MARSDEN: Your Honor, if they wanted to do that, they could have had their expert do the experiment.

MR. BOBROW: No. We tried to have our expert look at these tapes and testify about that, but that was precluded.

MR. JOHNSTON: Your Honor?

THE COURT: It's precluded by whom?

MR. BOBROW: By your Honor. Yes, you ruled that since it wasn't in his expert report, he couldn't talk about that. So I'd like to have the person who actually generated this tape talk about it.

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THE COURT: So you were saying Dr. Choti couldn't talk about it?
MR. BOBROW: No, Dr. Goldberg. I'm sorry. There are too many witnesses. Dr. Goldberg couldn't talk about it. Couldn't talk about Dr. Choti's or Dr. Taylor's. I'd like to ask Dr. Taylor about Dr. Taylor's video.
MR. JOHNSTON: Tom Johnston.
There is one other difference. They did not do the test on the same shoulder because they're done weeks apart, and I believe that Dr. Taylor's shoulder had been scoped several times. Not as representative as Dr. Choti's.
THE COURT: Was there any objection to Dr. Choti's being used? Like there is now?
MR. BOBROW: No, there wasn't. It was admitted into evidence without objection.
THE COURT: Well, I guess if I didn't rule on this issue before, my reaction to this issue is that this is an engineer playing with a dead body and it can't possibly be used for purposes of infringement. I mean I just think it's not appropriate. So the objection is sustained.
MR. MARSDEN: Thank you, your Honor.
MR. BOBROW: Thank you, your Honor.
(End of sidebar conference.)

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MR. BOBROW: Ladies and gentlemen, I apologize for the delay.
Why don't we move on to another exhibit?
May I approach, your Honor?
THE COURT: Yes, you may.
BY MR. BOBROW:
Q. Let me show you PX-324. PX-324 is already in evidence, sir.
A. Okay.
Q. And PX-324 is called Competitive Selling, ArthroCare with the name Rob Griffin.
Do you see that?
A. Yes.
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Q. And you have seen this document before, haven't you?
A. I think I have seen parts of it.
Q. Okay. And if you turn to Page ORA65076, you can see that this page talks about S&N ablation probes.
Do you see that?
A. Yes.
Q. One of those probes is the Saphyre bipolar ablation probe; correct?
A. Yes.
Q. And S&N stands for Smith & Nephew; right?
A. Yes.
Q. And if you go a little bit further into the document, at ORA65090, there is a document there called Managing Surgeon Expectations.
Do you see that?
A. Yes.
Q. And this is talking about Saphyre suction probes; right?
A. Just let me read it for a second.
Yes.
Q. And the Saphyre suction probes are designed so that, for example, they will clear bubbles that are generated when the devices are used in these arthroscopic surgeries; correct?

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A. Bubbles and other debris, yes.
Q. But including bubbles; right?
A. Including bubbles, yes.
Q. The second bullet point here says, quote, During use keep the electrode level with the target tissue for optimal evacuation of bubbles.
Do you see that?
A. Yes.
Q. And when it says level there, that Saphyre probe actually has a flat active electrode face; correct?
A. Yes, it does.
Q. And it says -- what I am pointing to here with my finger to PX-544, this is the active electrode tip; right?
A. Yes, it is.
Q. Way down here?
A. Yes.
Q. And that would then be presented to the tissue such as this; correct? It says to hold it flat; right?
A. That's what I would infer, yes.
Q. And you have inspected these probes before; correct?
A. Oh, yes.
Q. And when you look at these probes, you can see that the return electrode is actually recessed somewhat from the plane of the face of the active electrode; right?
A. Slightly, yes.

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Q. So if I were to hold this active electrode on that desk, that glass-top desk right there, and I held that active electrode flat, parallel to the desk, the return electrode wouldn't touch it, would it?
A. No, it wouldn't.
Q. Because it's recessed somewhat; correct?
A. I am presuming you are holding the probe, the shaft, parallel.
Q. That's right.
A. Okay.
Q. Now, if you take a look, also, at Page ORA65095, again, it's talking about managing surgeon expectations. And what is depicted there is the tip of one of these Saphyre probes; correct?
A. Yes.
Q. And you can see there that the very tip of the probe bends down at sort of a right angle so that the -- where those little lightning bolts and bubbles are, that is the active electrode face; right?
A. Yes.
Q. And here, the active electrode face is shown being parallel to the tip; right? That is what is being depicted there?
A. Yes.
Q. And the return electrode, as we are looking at this

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figure, would be off and to the left; correct?
A. Yes.
Q. That is where the return electrodes would be?
A. Yes.
Q. And you can see here, blown up somewhat, that, indeed, the return electrode in that portion of the shaft is recessed from the tissue that the active electrode faces, touching there; right?
A. In this cross-section, that's correct, yes.
Q. And there is an arrow pointing to the very tip of the device, and the very tip of the device has those two points, do you see them, on the left and the right?
A. Yes.
Q. And that's intended to depict that the active electrode tip is in contact with the tissue, right, at those tips?
A. Well, if you actually take a look at the Saphyre active electrode, it's got four little points that stick up. I think that's what that is depicting.
Q. So those two little sharp points on either side, those are in contact there with the tissue; right?
A. Yes.
Q. And then near the face of the active electrode, or it looks like it's little lightning bolts and some bubbles; right?

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A. That's correct.
Q. In describing that it says, quote, Tight seal between probe and tissue causes steam bubbles to form under electrode which allows an arc to be created and ablation to occur.
Do you see that?
A. Yes.
Q. And do you understand that that is, indeed, how the Saphyre bipolar ablation probes work when they are in operation?
A. I think the answer to your question is yes. They sort of omit the step that you got to apply energy to it to get to the arc and so forth. But I think the idea is it forms a steam layer and eventually an arc is generated and that ablates the tissue.
Q. Now, all of these devices that have been accused of infringement, all of them require an electrically conductive fluid to work; right?
A. Yes.
Q. And you did some tests, didn't you, when you were working on and looking at these various devices; right?
A. Are you talking about the experiments with the cadaver shoulder?
Q. Those and others; right?
A. Those are the best tests that I did, yes.

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Q. You also did some tests in distilled water, didn't you?
A. Yes.
Q. And distilled water is not an electrically conductive fluid, is it?
A. No.
Q. And you tested the Saphyre device, for example, in distilled water, didn't you?
A. Yes.
Q. And it didn't work, did it?
A. No, it did not.
Q. And you tried it in, you tried to use the Control RF --
A. Can I make just one comment?
Even though I know I said distilled water, it could also have been deionized distilled water. That is a little different than regular distilled water. Nonetheless, it didn't work.
Q. And both of those, deionized or distilled, they are both electrically nonconductive, they would be categorized as such in this field; correct?
A. Yes.
Q. And when you put the Control RF in this nonconductive fluid, it also didn't work, did it?
A. That's correct.

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Q. So these devices, to work, require the presence of an electrically conductive fluid; right?
A. Yes.
Q. And all of these devices work by creating a current flow path between the active and the return through an electrically conductive fluid; right?
A. And the tissue.
Q. And when these devices are used by doctors, they are always used with an electrically conductive fluid; correct?
A. Yes. The instructions for use specifically say that.
Q. And in terms of arthroscopic procedures, those are the procedures these devices are designed for; right?
A. Correct.
Q. When those procedures are done, there is always electrically conductive fluid inside the joint space; correct?
A. Yes.
Q. And these devices are used in that electrically conductive fluid; right?
A. Yes.
Q. And they need that electrically conductive fluid in order to work and treat the tissue inside of those joint spaces; right?
A. Yes.
Q. And if you didn't have the fluid in there, the

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electrically conductive fluid in there, that was administered to the knee or the shoulder, the devices wouldn't work, would they?
A. Well, in the case of the RF portion it does, because you are talking about whether or not other devices --
Q. Right?
A. In the case of other devices, when activated, it would work, you certainly would have electrically conductive fluid in the joint space, since arthroscopy is always used with electrically conductive fluid, you would need that.
Q. Even in the case of the ElectroBlade, you heard Ms. Drucker testify yesterday that the most popular mode of this operation of this ElectroBlade device is the simultaneous cutting and coag mode; right?
A. That's correct.
Q. By simultaneous cutting and coag, that means that the RF is on; correct?
A. Yes.
Are we finished with this so I can put it away?
Q. Yes, Dr. Taylor.
Dr. Taylor, I believe that I finished my line of questions and I appreciate your time. Thank you.
THE WITNESS: Thank you.

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THE COURT: Redirect.
REDIRECT EXAMINATION
BY MR. MARSDEN:
Q. Good afternoon, Dr. Taylor.
A. Good afternoon.
Q. Just a few questions. First of all, was there anything in Mr. Bobrow's questioning of you here on cross that has caused you to change or reconsider any of the opinions that you offered during your direct testimony?
A. No.
Q. Just to follow up on one of the last points that Mr. Bobrow made about holding the device level, I guess we could take any of these devices and hold them level, I think you talked about it in reference, for example, to a desktop.
Do you remember that question?
A. Yes.
Q. Is there any part of the inside of a joint that looks like the top of a desktop?
A. Not to my knowledge.
Q. Does it make sense to talk about keeping something parallel in the context of a joint?
A. No.
Q. I wanted to return to a couple of other points that Mr. Bobrow raised just briefly. First, he talked a little

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bit about the Doss patent.
Do you recall that?
A. Yes.
Q. In particular, he was asking you about the two electrodes in the Doss patent?
A. Right.
Q. Do you remember that?
A. Yes.
Q. I think the point of his question was, he was trying to suggest to you there may not be a return electrode in the Doss patent.
Did you understand that?
A. I think that was the line of reasoning, yes.
Q. Did the Court give us a definition of return electrode?
A. Yes.
MR. MARSDEN: Can we pull up, please, 675, Gary? If you could go to Paragraph 9, please... And blow up Paragraph 9, please.
BY MR. MARSDEN:
Q. Did you use the Court's definition of return electrode in determining whether or not the Doss reference had a return electrode?
A. Yes.
Q. And what is the critical element of the Court's

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definition of whether or not something constitutes a return electrode?
A. The critical element is an electrode having a larger area of contact than an active electrode, thus affording a lower current density.
Q. And when you reviewed the Doss patent, did you find such an electrode?
A. Yes. The outer electrode is -- just look at the geometry --
MR. MARSDEN: Can we pull up DDTX-458 again, Gary?
BY MR. MARSDEN:
Q. That is the Doss reference. Does that help answer the question?
A. Yes. In this geometry, the structure that is in yellow, cross-hatched yellow is the return electrode. And if you look at the sort of bottom-end view here, the active electrode is in red. The return electrode is there. And just on the basis of plane geometry if you assume both electrodes have the same thickness, the outer electrode will have more surface area.
Q. And does that outer electrode meet the Court's definition of a return electrode?
A. I believe it does.
Q. Turning to another subject, Mr. Bobrow asked you

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some questions about a correction you made during your deposition.
Do you recall that?
A. Yes.
Q. When you realized you had made a mistake at your deposition, what did you think was the right thing to do?
A. Well, based on the instructions I got -- my understanding was I can correct grammatical errors, I could correct typos. But I couldn't correct my deposition until I got to trial.
Q. There was another question that dealt with a lunch break and realizing over the lunch break that you had made an error in some of your earlier testimony.
Do you recall that?
A. Yes.
Q. When you realized that and you went into the deposition after the lunch break, what did you think was the right thing to do?
A. Basically, we told Mr. Bobrow about the error.
Q. Did you answer all of Mr. Bobrow's questions about the error?
A. Yes, I did.
Q. Did you answer them here again in court today?
A. Yes.
Q. Is there anything about that error or changing that

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error or correcting that error that changes any of your opinions that y u have offered here today?
A. No.
Q. Moving to another topic, Mr. Bobrow spent some time with you in connection with the Slager reference, talking about the fact that this was done in a dish with tissue that had been taken from an aorta.
Do you recall that?
A. Yes.
Q. Were you here when Mr. Eggers testified -- I guess it was at the end of last week -- about how he reduced his invention to practice?
A. Yes, I was.
Q. How did he do it?
A. He did it in, I don't know whether he used a chicken, but he did it in a Petri dish or dish. I don't think he said Petri, but in a dish.
Q. That was the same invention that you were talking about five minutes ago?
A. Same methodology, basically using tissue in vitro.
Q. The last topic, Dr. Taylor. You were asked early on in your cross-examination a lot of questions about the Roos reference and electrically conductive fluid.
Do you recall that?
A. Yes.

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Q. You were asked a bunch of questions about another patent to Mr. Roos, the '667 patent.
Do you recall that?
A. Yes.
Q. You knew about the Roos '667 patent, didn't you?
A. Yes, I did.
Q. You considered it before you rendered your opinions here today?
A. Yes, I did.
Q. Was there anything in the '667 patent that caused you to reconsider whether or not the teachings of the Roos '198 patent anticipate the '536 patent?
A. No, there isn't.
Q. Is there anything that Mr. Bobrow brought out during your cross-examination that has caused you to reconsider that?
A. No.
Q. Has the Court defined the term electrically conductive fluid for us?
A. Yes.
MR. MARSDEN: Can we pull up DX-675?
BY MR. MARSDEN:
Q. This time look at Paragraph 5. The Court has defined electrically conductive fluid to mean any fluid that facilitates the passage of electrical current;

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correct?
A. That's correct.
Q. And did you use that definition in rendering your opinions here today?
A. Yes.
Q. Did you find electrically conductive fluid as defined by the Court in the Roos '198 patent?
A. Yes.
MR. MARSDEN: Can we call up DDTX-444 again, please?
BY MR. MARSDEN:
Q. I think Mr. Bobrow asked you, in fact, about Claim 1 of the '198 patent. Where do you find a fluid that facilitates electrical current in the '198, Claim 1?
A. If you look in the language of Claim 1, the last couple of lines, with liquid to provide electrical conductance between said electrodes.
Q. Do you believe that is consistent with the Court's construction?
A. I believe it is.
Q. We also saw this during Mr. Sparks' demonstration of the equipment earlier today. You understood that this was the electrically conductive fluid that was used in the typical procedure?
A. Yes, I presume that's normal saline or lactated

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Ringer's.
MR. MARSDEN: May I approach, your Honor?
THE COURT: Yes.
BY MR. MARSDEN:
Q. Let me hand that up. I would ask you to look at the labeling on the top. Can you tell me how it describes that fluid?
A. Well, it says .9 percent sodium chloride irrigation.
Q. It says irrigation?
A. Irrigation.
Q. So it's calling that an irrigation fluid?
A. That's correct.
Q. Does it use the term electrically conducting fluid?
A. I don't see that anywhere on this label.
Q. Does the fact that it calls it irrigation fluid make it not electrically conductive fluid?
A. No.
Q. That fluid, is that electrically conductive fluid?
A. Yes.
MR. MARSDEN: No further questions.
THE COURT: All right. You may step down. Thank you very much.
THE WITNESS: Thank you, ma'am.
(Witness excused)
- - -

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THE COURT: Ladies and gentlemen, we will recess for the evening. You will be getting the case tomorrow at some point during the day. I will remind you that during the evening recess you are not to talk among yourselves or with anyone else, nor are you to listen to anything touching on the case. Do not perform any independent investigation.
Have a safe trip home, a pleasant evening. And we will see you tomorrow morning at 9:30.
(At this point the jury then left the courtroom, and the following occurred without the presence of the jury.)
THE COURT: Leave E-mail addresses with John here so that we can E-mail you our verdict form and final proposed jury instructions.
We are going to have to meet tomorrow morning. I have an 8:30 hearing, but it shouldn't take more than a few minutes. Why don't you get here about 8:45, so we can be sure to be ready to go at 9:30.
Thank you, counsel.
(Court recessed at 3:00 p.m., to reconvene on Friday, May 9, 2003, at 8:45 a.m.)
- - -

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	C.A. No. 01-504-SLR

SMITH & NEPHEW, INC., Counterclaim Plaintiff, v. ARTHROCARE CORPORATION, AND ETHICON, INC., Counterclaim Defendants.	

JURY VERDICT

We, the jury, unanimously find as follows:

I. INFRINGEMENT OF ARTHROCARE'S PATENTS

A. The '536 Patent

Direct Infringement by Smith & Nephew of the '536 Patent

1. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has directly infringed any of the following claims of the '536 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	(YES) NO	(YES) NO	(YES) NO
'536	47	(YES) NO	(YES) NO	(YES) NO
'536	56	(YES) NO	(YES) NO	(YES) NO

Inducement of Infringement by Smith & Nephew

2. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '536 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	(YES) NO	(YES) NO	(YES) NO
'536	47	(YES) NO	(YES) NO	(YES) NO
'536	56	(YES) NO	(YES) NO	(YES) NO

Contributory Infringement by Smith & Nephew

3. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement any of the following claim : of the '536 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	YES NO	YES NO	YES NO
'536	47	YES NO	YES NO	YES NO
'536	56	YES NO	YES NO	YES NO

B. The '882 Patent

Validity of Arthr Care's Certificate of Correction f r the '882 Patent

4. Do you find that Smith & Nephew has shown by clear and convincing evidence that the certificate of correction for claim 1 of the '882 patent is invalid? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

Patent	Claim	Invalid
'882	1	YES (NO)

Answer questions 5-6 only if you have answered "NO" in question 4.

Inducement of Infringement by Smith & Nephew of the '882 Patent

5. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '882 patent with its Saphyre or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	Control RF
'882	13	(YES) NO	
'882	17	(YES) NO	(YES) NO
'882	54	(YES) NO	(YES) NO

Contributory Infringement by Smith & Nephew of the '882 Patent

6. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement of any of the following claims of the '882 patent with its Saphyre or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	Saphyre with [illegible]	[illegible]	Control RF
'882	13	(YES) NO			
'882	17	(YES) NO			(YES) NO
'882	54		(YES) NO		(YES) NO

C. The '592 Patent

Inducement of Infringement by Smith & Nephew of the '592 Patent

7. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '592 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre		ElectroBlade		Control RF	
'592	1	YES	NO	YES	NO	YES	NO
'592	3	YES	NO	YES	NO	YES	NO
'592	4	YES	NO	YES	NO	YES	NO
'592	11	YES	NO	YES	NO	YES	NO
'592	21					YES	NO
'592	23	YES	NO	YES	NO	YES	NO
'592	26	YES	NO	YES	NO	YES	NO
'592	27	YES	NO	YES	NO	YES	NO
'592	32	YES	NO	YES	NO	YES	NO
'592	42					YES	NO

Contributory Infringement by Smith & Nephew of the '592 Patent

8. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement of any of the following claims of the '592 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre		ElectroBlade		Control RF	
'592	1	YES	NO	YES	NO	YES	NO
'592	3	YES	NO	YES	NO	YES	NO
'592	4	YES	NO	YES	NO	YES	NO
'592	11	YES	NO	YES	NO	YES	NO
'592	21					YES	NO
'592	23	YES	NO	YES	NO	YES	NO
'592	26	YES	NO	YES	NO	YES	NO
'592	27	YES	NO	YES	NO	YES	NO
'592	32	YES	NO	YES	NO	YES	NO
'592	42					YES	NO

II. VALIDITY OF ARTHROCARE'S PATENTS

A. Anticipati n of ArthroCare's Patents

9. Do you find that Smith & Nephew has shown by clear and convincing evidence that the following claims of the patents-in-suit are invalid due to anticipation? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

The '536 Patent

	Anticipated
Claim 46	YES (NO)
Claim 47	YES (NO)
Claim 56	YES (NO)

The '882 Patent

	Anticipated
Claim 13	YES (NO)
Claim 17	YES (NO)
Claim 54	YES (NO)

The '592 Patent

	Anticipated
Claim 1	YES (NO)
Claim 3	YES (NO)
Claim 4	YES (NO)
Claim 11	YES (NO)
Claim 21	YES (NO)
Claim 23	YES (NO)
Claim 26	YES (NO)
Claim 27	YES (NO)
Claim 32	YES (NO)
Claim 42	YES (NO)

D. **Enablement of ArthroCare's Patent**

10. Do you find that Smith & Nephew has shown by clear and convincing evidence that the following claims are invalid for lack of enablement? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

Patent	Claims	Invalid
'882	13, 17, 54	YES (NO)

Each Juror should sign the verdict form to reflect that a unanimous verdict has been reached.

Dated: May 12, 2003

Foreperson

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 01-504-SLR
	)	
SMITH & NEPHEW, INC.,	)	
	)	
Defendant.	)	

JUDGMENT IN A CIVIL CASE

ArthroCare Corporation, plaintiff, and Smith & Nephew, defendant, came before the Court for a trial by jury. On May 12, 2003, the jury rendered a verdict (D.I. 405, copy attached) on the issues of patent infringement of claims 46, 47, and 56 of the `536 patent, claims 13, 17, and 54 of the `882 patent, claims 1, 3, 4, 11, 21, 23, 26, 27, 32, and 42 of the `592 patent and of patent invalidity of claims 46, 47, and 56 of the `536 patent, claims 13, 17, and 54 of the `882 patent, and claims 1, 3, 4, 11, 21, 23, 26, 27, 32, and 42 of the `592 patent and of patent enablement of claims 13, 17, and 54 of the `882 patent and of patent validity of the Certificate of Correction of claim 1 of the `882 patent. The jury found for plaintiff as to all issues.

Therefore,

IT IS ORDERED AND ADJUDGED that judgment be and is hereby entered in favor of ArthroCare Corporation, plaintiff, and against Smith & Nephew, defendant.

United States District Judge

Dated: June 20, 2003

(By) Deputy Clerk

405

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	C.A. No. 01-504-SLR
SMITH & NEPHEW, INC., Counterclaim Plaintiff, v. ARTHROCARE CORPORATION, AND ETHICON, INC., Counterclaim Defendants.	

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Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	YES NO	YES NO	YES NO
'536	47	YES NO	YES NO	YES NO
'536	56	YES NO	YES NO	YES NO

Inducement of Infringement by Smith & Nephew

2. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '536 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	YES NO	YES NO	YES NO
'536	47	YES NO	YES NO	YES NO
'536	56	YES NO	YES NO	YES NO

Contributory Infringement by Smith & Nephew

3. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement any of the following claims of the '536 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'536	46	YES NO	YES NO	YES NO
'536	47	YES NO	YES NO	YES NO
'536	56	YES NO	YES NO	YES NO

B. The '882 Patent

Validity of ArthroCare's Certificate of Correction for the '882 Patent

4. Do you find that Smith & Nephew has shown by clear and convincing evidence that the certificate of correction for claim 1 of the '882 patent is invalid? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

Patent	Claim	Invalid
'882	1	YES (NO)

Answer questions 5-6 only if you have answered "NO" in question 4.

Inducement of Infringement by Smith & Nephew of the '882 Patent

5. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '882 patent with its Saphyre or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	Saphyre with Suction	Electrosurgery	Control RF
'882	13	(YES) NO			
'882	17	(YES) NO			(YES) NO
'882	54		(YES) NO		(YES) NO

Contributory Infringement by Smith & Nephew of the '882 Patent

6. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement of any of the following claims of the '882 patent with its Saphyre or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	Saphyre with Suction	Electrosurgical	Control RF
'882	13	YES NO			
'882	17	YES NO			YES NO
'882	54		YES NO		YES NO

C. The '592 Patent

Inducement of Infringement by Smith & Nephew of the '592 Patent

7. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has induced infringement by others of any of the following claims of the '592 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

Patent	Claim	Saphyre	ElectroBlade	Control RF
'592	1	YES NO	YES NO	YES NO
'592	3	YES NO	YES NO	YES NO
'592	4	YES NO	YES NO	YES NO
'592	11	YES NO	YES NO	YES NO
'592	21			YES NO
'592	23	YES NO	YES NO	YES NO
'592	26	YES NO	YES NO	YES NO
'592	27	YES NO	YES NO	YES NO
'592	32	YES NO	YES NO	YES NO
'592	42			YES NO

Contributory Infringement by Smith & Nephew of the '592 Patent

8. Do you find that Arthrocare has shown by a preponderance of the evidence that Smith & Nephew has contributed to the infringement of any of the following claims of the '592 patent with its Saphyre, ElectroBlade, or Control RF products? ("YES" answers to these questions are findings for ArthroCare. "NO" answers are findings for Smith & Nephew.)

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'592	1	YES	NO	YES	NO	YES	NO
'592	3	YES	NO	YES	NO	YES	NO
'592	4	YES	NO	YES	NO	YES	NO
'592	11	YES	NO	YES	NO	YES	NO
'592	21					YES	NO
'592	23	YES	NO	YES	NO	YES	NO
'592	26	YES	NO	YES	NO	YES	NO
'592	27	YES	NO	YES	NO	YES	NO
'592	32	YES	NO	YES	NO	YES	NO
'592	42					YES	NO

II. VALIDITY OF ARTHROCARE'S PATENTS

A. Anticipation of ArthroCare's Patents

9. Do you find that Smith & Nephew has shown by clear and convincing evidence that the following claims of the patents-in-suit are invalid due to anticipation? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

The '536 Patent

	Anticipated
Claim 46	YES (NO)
Claim 47	YES (NO)
Claim 56	YES (NO)

The '882 Patent

	Anticipated
Claim 13	YES (NO)
Claim 17	YES (NO)
Claim 54	YES (NO)

The '592 Patent

	Anticipated
Claim 1	YES (NO)
Claim 3	YES (NO)
Claim 4	YES (NO)
Claim 11	YES (NO)
Claim 21	YES (NO)
Claim 23	YES (NO)
Claim 26	YES (NO)
Claim 27	YES (NO)
Claim 32	YES (NO)
Claim 42	YES (NO)

D. Enablement of ArthroCare's Patent

10. Do you find that Smith & Nephew has shown by clear and convincing evidence that the following claims are invalid for lack of enablement? (A "YES" answer to this question is a finding for Smith & Nephew. A "NO" answer is a finding for ArthroCare.)

Patent #	Claims	Invalid
'882	13, 17, 54	YES (NO)

Each Juror should sign the verdict form to reflect that a unanimous verdict has been reached.

Dated: May 12, 2003

Foreperson

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	C.A. No. 01-504-SLR
SMITH & NEPHEW, INC., Counterclaim Plaintiff, v. ARTHROCARE CORPORATION, AND ETHICON, INC., Counterclaim Defendants.	

SMITH & NEPHEW'S OPENING BRIEF IN SUPPORT OF ITS INEQUITABLE CONDUCT CASE

Dated: June 9, 2003

FISH & RICHARDSON P.C.
William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Kurtis D. MacFerrin
500 Arguello Street, Suite 500
Redwood City, California 94063
Telephone: (650) 839-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

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STATUTES

TABLE OF AUTHORITIES (cont'd)

I. NATURE AND STAGE OF THE PROCEEDINGS

This is a patent infringement case in which the plaintiff ArthroCare Corp. ("ArthroCare") has accused the defendant Smith & Nephew, Inc. ("Smith & Nephew") of infringing three of ArthroCare's patents.

A. Procedural Background

There are six issues in this case which have been bifurcated into two phases. The issues of infringement, validity, and inequitable conduct were set for the first phase of the case, whereas the issues of damages, willfulness, and antitrust violation were bifurcated for the second phase of the case. An eight-day jury trial was held on the issues of validity and infringement from April 30, 2003 through May 9, 2003.

On May 12, 2003, the Court ruled that Smith & Nephew could submit its inequitable conduct case on the briefs (Tr. at 1701-02) (D.I. 418), with the schedule to be worked out between the parties (Tr. at 1749).[1] Smith & Nephew has tried to work out such a briefing schedule with ArthroCare, but has been unsuccessful. Although no briefing schedule has yet been agreed upon, this is Smith & Nephew's Opening Brief in Support of its Inequitable Conduct case, submitted in accordance with Smith & Nephew's proposed briefing schedule.

B. The Deposition of Examiner Mendez

In addition to submitting this opening brief, Smith & Nephew renews its request for leave to take the deposition of Examiner Mendez, and also seeks leave to supplement this brief with such deposition testimony, with respect to the '536 reexamination.

During the pretrial conference on April 15, 2003, Smith & Nephew raised the question of taking such a deposition and supplementing the inequitable conduct record, in

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[1] Instead of discussing a briefing schedule for the inequitable conduct case with Smith & Nephew, on May 20, 2003 ArthroCare filed a Motion for Entry of Judgment of No Inequitable Conduct (D.I. 427, 428), in which it attempts to anticipate some of Smith & Nephew's inequitable conduct case. Smith & Nephew has opposed and moved to strike such motion as improper (D.I. 437).

the event that the Patent and Trademark Office ("PTO") granted permission to take the Examiner's deposition. (4/15/03 Hearing Tr. at 15-18) (D.I. 371). The Court indicated that it was willing to potentially consider such deposition testimony. (*Id.* at 35-36):

> So we're back to the examiner and I'd like to hear from Mr. Hebert whether it makes any sense to just kind of take up plaintiff's suggestion that this might be an issue that I would have a better feel for once I heard the evidence and that I guess we could supplement the record with deposition testimony if, after the conclusion of the evidence, I thought that, in fact, a deposition should be taken to clarify issues.

The Court also indicated that it would reserve a decision on the issue of the Examiner's deposition. (*Id.* at 36).

Following the completion of trial, the reexamination certificate for the '536 patent issued. Since the pendency of the reexamination was the only ground on which the PTO had denied Smith & Nephew's request to take the deposition of the examiner, and that ground was now moot, Smith & Nephew formally renewed its request with the PTO Solicitor's Office to take the deposition of Examiner Mendez. (Exhibit A to the accompanying Declaration of William J. Marsden In Support of Smith & Nephew's Opening Brief In Support Of Its Inequitable Conduct Case ("Marsden Dec.").[2] A favorable response is expected shortly.

Accordingly, Smith & Nephew should be given leave to take the deposition of Examiner Mendez, and supplement the inequitable conduct record with testimony from such deposition.

II. SUMMARY OF ARGUMENT

Proceedings in the PTO impose an "uncompromising duty" of candor and good faith on everyone involved in prosecution of the patent application. Violation of this duty

[2] In accordance with the Court's request, the accompanying Marsden Dec. also includes the trial exhibits, or -- in the case of the file histories -- the portions of the trial exhibits referred to herein.

is called "inequitable conduct" and results in the subject patent -- although it may still be valid -- being unenforceable due to equitable considerations.

Here, ArthroCare committed inequitable conduct in connection with each of the three patents in suit. The issues related to the '592 and '536 patents were previously pled. The issues related to ArthroCare's inequitable conduct in connection with the '882 patent, and particularly in connection with the Certificate of Correction obtained during prosecution of the '882 patent, are based on the testimony that came out at trial, particularly from Dr. Goldberg and Mr. Raffle. In addition, under the unclean hands doctrine, because the three patents in suit are so closely related, the inequitable conduct in connection with any one or two of the patents taints the others, and renders them unenforceable as well.

ArthroCare committed inequitable conduct with respect to the '592 patent in overcoming the Examiner's rejection based on the prior art Roos '198 patent. In particular, ArthroCare's in-house patent attorney, Mr. John Raffle, deceived the PTO by misrepresenting the disclosure of the Roos '198 patent, by omitting material information about the teaching of the Roos '198 patent, particularly as found by Judge Orrick in the *ArthroCare v. Ethicon* case, and by making misleading arguments about other references. The Orrick opinion in particular was material information itself that was required to be submitted to the PTO pursuant to MPEP 2001.06(c). Yet Mr. Raffle did not do so.

With respect to the reexamination of the '536 patent, ArthroCare committed two types of inequitable conduct. The first relates to ArthroCare's failure to disclose Smith & Nephew's summary judgment briefs, the Taylor expert report, and the Roos Declaration, as required by MPEP 2001.06(c). The second is closely related to ArthroCare's inequitable conduct during prosecution of the '592 patent, and ArthroCare's arguments in overcoming the Roos '198 patent during such prosecution. In particular, Mr. Raffle had numerous off-the-record telephone conversations with the Examiner regarding the merits of the reexamination before a first Office Action on the merits and without filing timely

interview summaries, all in clear violation of the applicable Patent Office rules. It is believed that in these off-the-record communications, Mr. Raffle may have convinced the Examiner to simply parrot back the arguments that Mr. Raffle had previously made with respect to the Roos '198 patent during prosecution of the '592 patent without performing any independent analysis.

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III. STATEMENT OF FACTS

The relevant facts are set forth in the Argument sections, as appropriate.

IV. ARGUMENT

A. The Law Relating to Inequitable Conduct

The law relating to the issue of inequitable conduct derives from the fact that patent applications are prosecuted in secret *ex parte* proceedings which involve only the applicant and the patent examiner. Accordingly, the cases from the Supreme Court, the Court of Claims, the Court of Customs and Patent Appeals, and the Federal Circuit, have all consistently held that patent applicants and everyone involved in the application process have "an uncompromising duty of candor to the Patent Office."

1. Uncompromising Duty of Candor and Good Faith

Because proceedings in the Patent office are conducted on an *ex-parte* basis, the Supreme Court has explained that "[t]hose who have applications pending with the Patent Office ... have an uncompromising duty to report to it all facts concerning possible fraud

or inequitableness underlying the applications in issue." *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806, 818 (1945).

Thus, an applicant for a patent owes "the highest degree of candor and good faith" to the Patent Office. *Kingsland v. Dorsey*, 338 U.S. 318, 319 (1949); *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1233 (Fed. Cir. 2003) ("It is well settled that patent applicants are required to prosecute patent applications 'with candor, good faith, and honesty.'") (quoting *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995)); *Hycor Corp. v. Schlueter Co.*, 740 F.2d 1529, 1538 (Fed. Cir. 1984).

This duty of candor is predicated upon reasons of policy and practicality. By way of underlying purpose:

> [A] patent is an exception to the general rule against monopolies and to the right of access to a free and open market. The far-reaching social and economic consequences of a patent, therefore, give the public a paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct and that such monopolies are kept within their legitimate scope.

Precision Instrument, 324 U.S. at 816; *The Proctor & Gamble Co. v. Kimberly-Clark Corp.*, 740 F.Supp. 1177, 1196 (D.S.C. 1989).

The Federal Circuit has observed that inequitable conduct can include "affirmative acts of commission, e.g., submission of false information, as well as omissions, e.g. failure to disclose material information." *J.P. Stevens & Co. v. Lex Tex Ltd., Inc.*, 747 F.2d 1553, 1559 (Fed. Cir. 1984).

The Federal Circuit articulated a two-step analysis -- involving findings of materiality and intent -- for determining whether inequitable conduct has been committed in *Halliburton Co. v. Schlumberger Technology Corp.*, 925 F.2d 1435, 1439-40 (Fed. Cir. 1991) (citations omitted) as follows:

> The trial court must discern whether the withheld references satisfy a threshold level of materiality. The court must also determine whether

the event that the Patent and Trademark Office ("PTO") granted permission to take the Examiner's deposition. (4/15/03 Hearing Tr. at 15-18) (D.I. 371). The Court indicated that it was willing to potentially consider such deposition testimony. (*Id.* at 35-36):

> So we're back to the examiner and I'd like to hear from Mr. Hebert whether it makes any sense to just kind of take up plaintiff's suggestion that this might be an issue that I would have a better feel for once I heard the evidence and that I guess we could supplement the record with deposition testimony if, after the conclusion of the evidence, I thought that, in fact, a deposition should be taken to clarify issues.

The Court also indicated that it would reserve a decision on the issue of the Examiner's deposition. (*Id.* at 36).

Following the completion of trial, the reexamination certificate for the '536 patent issued. Since the pendency of the reexamination was the only ground on which the PTO had denied Smith & Nephew's request to take the deposition of the examiner, and that ground was now moot, Smith & Nephew formally renewed its request with the PTO Solicitor's Office to take the deposition of Examiner Mendez. (Exhibit A to the accompanying Declaration of William J. Marsden In Support of Smith & Nephew's Opening Brief In Support Of Its Inequitable Conduct Case ("Marsden Dec.").[2] A favorable response is expected shortly.

Accordingly, Smith & Nephew should be given leave to take the deposition of Examiner Mendez, and supplement the inequitable conduct record with testimony from such deposition.

II. SUMMARY OF ARGUMENT

Proceedings in the PTO impose an "uncompromising duty" of candor and good faith on everyone involved in prosecution of the patent application. Violation of this duty

[2] In accordance with the Court's request, the accompanying Marsden Dec. also includes the trial exhibits, or -- in the case of the file histories -- the portions of the trial exhibits referred to herein.

is called "inequitable conduct" and results in the subject patent -- although it may still be valid -- being unenforceable due to equitable considerations.

Here, ArthroCare committed inequitable conduct in connection with each of the three patents in suit. The issues related to the '592 and '536 patents were previously pled. The issues related to ArthroCare's inequitable conduct in connection with the '882 patent, and particularly in connection with the Certificate of Correction obtained during prosecution of the '882 patent, are based on the testimony that came out at trial, particularly from Dr. Goldberg and Mr. Raffle. In addition, under the unclean hands doctrine, because the three patents in suit are so closely related, the inequitable conduct in connection with any one or two of the patents taints the others, and renders them unenforceable as well.

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> The trial court must discern whether the withheld references satisfy a threshold level of materiality. The court must also determine whether

> the applicant's conduct satisfies a threshold showing of intent to mislead. ... Next, assuming satisfaction of the thresholds, the trial court must balance materiality and intent. The more material the omission, the less culpable the intent required, and vice versa.

2. Materiality

Inequitable conduct requires both materiality and intent. *J.P. Stevens*, 747 F.2d at 1559-60. Inequitable conduct occurs by a patentee's "affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information." *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1233 (Fed. Cir. 2003)(quoting *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178 (Fed. Cir. 1995)). Information is material when "[i]t refutes, or is inconsistent with, a position the applicant takes in (i) Opposing an argument of unpatentability relied on by the [Patent] Office, or (ii) Asserting an argument of patentability." *37 C.F.R. § 1.56(b)(2)(i)-(ii).*

Prior to 1992, "Rule 56 defined information as 'material' when 'there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent.'" *Molins PLC*, 48 F.3d at 1179, n.8. The Federal Circuit has "adopted this standard as the threshold standard of materiality." *Id.* While the PTO changed Rule 56, as reflected above, in 1992, the Federal Circuit has yet to comment on whether the change in the Rule will change its use of the "reasonable examiner" standard. *Id., see also Dayco Prods., Inc. v. Total Containment, Inc.*, 2003 WL 21203300, *5 (Fed. Cir. May 23, 2003) ("Thus, we have not decided whether the standard for materiality in inequitable conduct cases is governed by equitable principles or by the Patents Office's rules").[3] However, the Federal Circuit has applied the "reasonable examiner" standard to patents that were filed after the 1992 change to Rule 56. *See, e.g., Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1380 (Fed.

[3] Former commissioner Manbeck, who was involved in promulgating the new version of the rule, has testified that it was not intended to change the scope of Rule 56, but to simply make it more precise. *Boeringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 68 F.Supp2d 508, 525-526 (D. N.J. 1999).

Cir. 2001). Whichever standard the Court eventually decides to employ, "intentional falsehoods and omissions [] would be plainly material under the newer PTO rule as well" as under the "reasonable examiner" standard. *PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1322, n.2 (Fed. Cir. 2000).

The most highly material references are those that anticipate any of the patent's claims. *Fox Industries, Inc. v. Structural Preservation Systems, Inc.*, 922 F.2d 801, 804 (Fed. Cir. 1990). But a reference does not have to render a patent invalid to be material. *PerSeptive Biosystems, Inc.*, 225 F.3d at 1322; *Merck & Co., Inc. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1421, (Fed. Cir. 1989); *Gardco Manufacturing, Inc. v. Herst Lighting Co.*, 820 F.2d 1209, 1214 (Fed. Cir. 1987); *A.B. Dick v. Burroughs Corp.*, 798 F.2d 1392, 1347 (Fed. Cir. 1986); *Consolidated Aluminum Corp. v. Foseco International Ltd.*, 910 F.2d 804, 812 (Fed. Cir. 1990); *RCA Corp. v. Data General Corp.* 701 F. Supp. 456, 474 (D. Del. 1988), *aff'd*, 887 F.2d 1056 (Fed. Cir. 1989); *Bristol-Myers Squibb*, 326 F.3d at 1237.

3. Intent to Mislead or Deceive

In *Kingsdown Medical Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988) the Federal Circuit articulated the showing of intent required to support a finding of inequitable conduct as "intent to deceive."

Intent, while required, can usually only be inferred from circumstantial evidence. *Bristol-Myers Squibb*, 326 F.3d at 1239 ("Intent to mislead does not require direct evidence, and is typically inferred from the facts."); *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 882 F.2d 1556, 1562 (Fed. Cir. 1989); *Klein v. Peterson*, 866 F.2d 412, 415 (Fed. Cir. 1989); *Rohm & Haas Co. v. Crystal Chemical Co.*, 722 F.2d 1556, 1571 (Fed. Cir. 1983).

Since adopting the "intent to deceive" standard in *Kingsdown*, the Federal Circuit and other courts have repeatedly emphasized that "[i]ntent need not, and rarely can, be proven by direct evidence." *Merck & Co.*, 873 F.2d at 1422; *see also Paragon Podiatry*

Laboratory, Inc. v. KLM Laboratories, Inc., 984 F.2d 1182, 1189-90 (Fed. Cir. 1993) ("'smoking gun' evidence is not required in order to establish an intent to deceive. ... Rather, this element of inequitable conduct, must generally be inferred from the facts and circumstances surrounding the applicant's overall conduct."); *LaBounty Mfg., Inc. v. U.S. Intern. Trade Com'n*, 958 F.2d 1066, 1076 (Fed. Cir. 1992) ("Direct proof of wrongful intent is rarely available but may be inferred from clear and convincing evidence of the surrounding circumstances."); *Halliburton*, 925 F.2d at 1442; *Critikon Inc. v. Becton Dickinson Vascular Access Inc.*, 28 USPQ 2d 1362, 1370 n.2 (D. Del. 1993) ("Because direct evidence of an intent to deceive rarely exists, the Court may rely on circumstantial evidence leading to an inference of intent to mislead as the basis for a finding of inequitable conduct."); *Molins PLC v. Textron, Inc.*, 821 F. Supp. 1551, 1566 (D. Del. 1992); *Mushroom Associates v. Monterey Mushrooms Inc.*, 25 USPQ 2d 1304, 1310 (N.D. Calif. 1992) ("Rarely will there be direct evidence of a party's intent to deceive or mislead.... Such intent must frequently be determined from the facts and circumstances of the patent prosecution."); *Arcade Inc. v. Minnesota Mining & Manufacturing Co.*, 24 USPQ 2d 1578, 1588 (E.D. Tenn. 1991) ("The threshold level of intent does not require evidence of deliberate scheming and need not be shown by direct evidence."); *Carroll Touch Inc. v. Electro Mechanical Systems Inc.*, 24 USPQ 2d 1349, 1353 (C.D. Ill. 1992) ("Deliberate conduct can be inferred from the fact that the applicant had knowledge of the material information."), *aff'd in part & vacated in part*, 15 F.3d 1573 (Fed. Cir. 1993); *Black and Decker Inc. v. Hoover Service Center*, 765 F. Supp. 1129, 1137 (D. Conn. 1991).

Intent may be inferred from clear materiality -- sometimes reinforced by the patentee's complete absence of good faith justification for the failed conduct. *Nintendo of America Inc. v. Magnavox Inc.*, 10 USPQ 2d 1504, 1507 (S.D.N.Y. 1989) ("inferences of intent may be drawn from considerations touching on materiality and an applicant's knowledge thereof"); *Proctor & Gamble*, 12 USPQ 2d at 1593-94 (Stating that where

materiality is clear it is "difficult to establish 'subjective good faith' sufficient to prevent the drawing of an inference of intent to mislead.") (quoting *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1415-16 (Fed. Cir. 1987); *see also Critikon, Inc.*, 120 F.3d at 1256 ("intent may be inferred where a patent applicant knew, or should have known, that withheld information would be material to the PTO's consideration of the patent application."); *see also Brasseler*, 267 F.3d at 1375-76, 1380 (same). "Further, where withheld information is material and the patentee knew or should have know of that materiality, he or she can expect to have great difficulty in establishing subjective good faith sufficient to overcome an inference of intent to mislead." *Bristol-Myers Squibb*, 326 F.3d at 1239.

In *LaBounty*, the Federal Circuit pointed out:

> No single factor or combination of factors can be said always to require an inference of intent to mislead; yet a patentee facing a high level of materiality and clear proof that it knew or should have known of that materiality, can expect to find it difficult to establish "subjective good faith" sufficient to prevent the drawing of an inference of intent to mislead. "A mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct) will not suffice in such circumstances."

LaBounty, 958 F.2d at 1076 (quoting *FMC Corp.*, 835 F.2d at 1416). Similarly, in its most recent pronouncement on the law of inequitable conduct, the Federal Circuit explained that "the determination that Mr. Pilard knew of the significance of the [withheld information] in combination with the finding that he knew of the duty to disclose is sufficient to establish intent." *Bristol-Myers Squibb*, 326 F.3d at 1240.

The materiality and intent standards are balanced -- i.e. the more material a reference, the lesser the degree of intent that must be proved to establish inequitable conduct. *Bristol-Myers Squibb*, 326 F.3d at 1234 ("when balanced against high materiality, the showing of intent can be proportionally less"); *Halliburton*, 925 F.2d at

1439. Once inequitable conduct is found, all claims of the patent are unenforceable. *Bristol-Myers Squibb*, 326 F.3d at 1233; *J.P. Stevens*, 747 F.2d at 1561.

B. Specific Instances of Inequitable Conduct In Connection With ArthroCare's Patents

Smith & Nephew relies on inequitable conduct committed by ArthroCare and its representatives in connection with the procurement of the '592 and '882 patents and the reexamination of the '536 patent. The issues related to the '592 and '536 patents were previously pled. The issues related to ArthroCare's inequitable conduct in connection with the '882 patent, and particularly in connection with the Certificate of Correction obtained during prosecution of the '882 patent, are based on the testimony that came out at trial, particularly from Dr. Goldberg and Mr. Raffle.[4] In addition, under the unclean hands doctrine, because the three patents in suit are so closely related, the inequitable conduct in connection with any one or two of the patents taints the other patent(s) such that all three are unenforceable. *See Consolidated Aluminum v. Foseco International*, 910 F.2d 804, 810 (Fed. Cir. 1990).

1. ArthroCare's Inequitable Conduct In Connection With The '592 Patent

ArthroCare committed inequitable conduct with respect to the '592 patent in overcoming the Examiner's rejection based on the prior art Roos '198 patent. (U.S. Patent No. 4,116,198, DTX-11, Exhibit B). At the time, virtually all of the pending claims stood rejected over the Roos '198 patent. The rejection was based on the

[4] The court should liberally amend pleadings to conform to the evidence at trial. Fed. R. Civ. P. 15(a) ("[L]eave shall be freely given when justice so requires."); *see Fernandez v. Haynie*, 31 Fed. App. 816 (4th Cir. 2002) (finding that the district court did not abuse its discretion in allowing party to amend his pleading to conform to the evidence); *Deakyne v. Commissioners of Lewes*, 416 F.2d 290, 298 (3d Cir. 1969) (citing *Newman v. Zinn*, 164 F.2d 558, 559-560 (3d Cir. 1947)) ("Under the Federal Rules of Civil Procedure ... the plaintiff is not bound by the theory of his pleadings. He may offer his proof and conform his pleadings to the proof offered 'when the presentation of the merits of the action will be subserved thereby.'"); *Rhone-Poulenc Agro S.A. v. Monsanto Co.*, 73 F.Supp.2d 537 (M.D.N.C. 1999) (patent infringement defendant was allowed to amend pleadings at close of discovery in order to assert claim that patent was obtained by inequitable conduct, and thus was unenforceable).

Examiner's understanding that the Roos '198 patent inherently disclosed the use of electrically conducting fluid, which was required by the claims of the '592 application.

In overcoming the Examiner's rejection, ArthroCare's in-house patent attorney, Mr. John Raffle, deceived the PTO by misrepresenting the disclosure of the Roos '198 patent, by omitting material information about the teaching of the Roos '198 patent, particularly as found by Judge Orrick in the earlier *ArthroCare v. Ethicon* case, and by making misleading arguments about other references -- without bothering to discuss the Elsasser and Roos article which undercut those arguments. Smith & Nephew's proof of such inequitable conduct is supported by the trial testimony of both Mr. Raffle and Smith & Nephew's expert Dr. Taylor (whose testimony was not rebutted at trial), as well as the file history for the '592 patent and the disclosures of the relevant prior art references.

a. The Rejection Based on the Roos '198 Patent

On February 29, 2000, the PTO issued an Office Action rejecting virtually all of the claims of ArthroCare's application for the '592 patent as either anticipated by the Roos '198 patent alone, or rendered obvious by the Roos '198 patent in combination with some other reference. (DTX-301 at 13-17, Exhibit C). In the Office Action, the Examiner characterized the Roos '198 patent as follows (*Id.* at 16) (emphasis added):

> The device includes a spaced return electrode as shown by Figure 1. A washing fluid passes through the axial lumen of the device. *Since the return electrode is removed from the body structure, a conductive fluid must complete the current flow path.*

The language used by the Examiner in the last sentence -- "a conductive fluid *must* complete the current flow path" -- meant that the Examiner understood the disclosure of conductive fluid in the Roos '198 patent to be "necessarily present," or in other words "inherent," rather than explicit. *See, e.g., Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

Accordingly, in preparing his Office Action it is clear that the Examiner did not actually review claim 1 of the Roos '198 patent.[5] Had he done so, the Examiner certainly would have referred to claim 1 of the Roos '198 patent as supporting his rejection. He certainly would not have issued a rejection based on *inherency* grounds, since claim 1 of the Roos '198 patent explicitly discloses electrically conductive fluid as follows (DTX-11 at col. 7, lines 59-62) (emphasis added):

> [A] space being formed between said treatment electrode and said neutral electrode which is adapted to be filled with *liquid to provide electrical conductance* between said electrodes.

b. The Disclosure of Electrically Conductive Fluid in Roos

It is clear that the "liquid to provide electrical conductance" in claim 1 of the Roos '198 patent is the same as "electrically conductive fluid" as used in the '592 patent, for at least two reasons:

First, the words used in claim 1 of the Roos '198 patent clearly meet this Court's interpretation of "electrically conductive fluid" (4/9/03 Memorandum Order at 3) (D.I. 353):

> "[E]lectrically conducting fluid" and "electrically conductive fluid" shall be construed to mean "any fluid that facilitates the passage of electrical current."

In its definition, all the Court required was that the fluid "facilitate[] the passage of electrical current." Of course, a "liquid" is a type of "fluid," and since "facilitate" means simply "to make easier," a "liquid to *provide* electrical conductance" in claim 1 of the Roos '198 patent squarely meets this Court's definition of "any fluid that *facilitates* the passage of electrical current."

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[5] *See, e.g., Bristol-Myers Squibb*, 326 F.3d at 1236 ("The lack of any objective evidence that the Examiner reviewed the article in connection with his review of the '011 patent application supports the court's finding that the JACS article was not before the PTO in its review of the '011 patent application.").

Second, it was *undisputed* at trial that the Roos '198 patent disclosed the use of electrically conductive fluid. Here is the testimony of Dr. Taylor, Smith & Nephew's expert, on the issue (Tr. at 1301-03) (D.I. 416) (emphasis added):

> Q. Dr. Taylor, have you prepared a slide to tell the jury what the Roos '198 patent is about?
>
> A. Yes, I have. ...
>
> The Roos '198 patent basically follows up on the work that Doctors Elsasser and Roos did in their article and it's a bipolar electrosurgical device for the treatment of prostate and bladder tissue, commonly known as TURP.
>
> * * *
>
> Q. Have you done an element-by-element comparison of the teachings of the Roos '198 with the claims of the '536 patent?
>
> A. Yes, I have.
>
> Q. Have you prepared some slides to illustrate that?
>
> A. Yes, I have. ...
>
> *It also requires an electrically conducting fluid supply, directed to the target site and generating current, flow path between the active and return electrode. That is diagramatically shown here in Figures 7 and 8 and also specifically called out in Claim 1, basically the last line in Claim 1. So that element is satisfied.*
>
> Q. *Just to pause on this one for a moment, that language that is quoted below the drawing comes from Claim 1 of the Roos '198 patent?*
>
> A. *That's correct.*
>
> Q. *That is where you found support for the electrically conduct[ing] fluid limitation?*
>
> A. *Yes.*

ArthroCare did not introduce any contrary testimony, and did not even call its own expert Dr. Goldberg to testify in rebuttal to Smith & Nephew's invalidity case. And while ArthroCare did cross-examine Dr. Taylor on this issue, Dr. Taylor did not waver in his opinion that claim 1 of the Roos '198 patent disclosed the use of electrically conductive fluid. Indeed, the only admission that ArthroCare obtained from Dr. Taylor

was that the Roos '198 patent did not explicitly use either the word "saline" or the term "Lactated Ringer's." (Tr. at 1375) (D.I. 416). However, the Court has already ruled that electrically conductive fluid is not limited to saline or Lactated Ringer's, but instead includes "*any fluid* that facilitates the passage of electrical current" (emphasis added).

Accordingly, Smith & Nephew has established that the disclosure of "liquid to provide electrical conductance" in claim 1 of the Roos '198 patent was both highly material to the prosecution of the '592 patent and had been overlooked by the Examiner.

c. Mr. Raffle's Arguments to the Examiner

In his response to the Examiner's Office Action of February 29, 2000, Mr. Raffle took advantage of the fact that the Examiner had not reviewed claim 1 of the Roos '198 patent, and argued that Roos did *not* disclose the use of electrically conductive fluid (*see, e.g.*, DTX-301 at 22):

> Because the Roos '198 Patent does not disclose the use of electrically conductive fluid with any devices disclosed therein, it cannot anticipate any of the claims of this application.
>
> * * *
>
> The Roos '198 Patent does not state that the "washing liquid" that is supplied to the region of the surgical site is electrically conductive fluid.

There can be no dispute that when Mr. Raffle made these arguments to the PTO, he *knew* that they were wrong. In particular, when he was cross-examined at trial, Mr. Raffle squarely admitted that when he made these arguments to the Examiner, he *knew* about the disclosure of electrically conductive fluid, *i.e.*, "liquid to provide electrical conductance," in claim 1 of the Roos '198 patent, but did not tell the Examiner about what he knew (Tr. at 1516-17) (D.I. 417) (emphasis added):

> Q. Okay. You filed -- you prosecuted the '592 patent; correct?
>
> A. That's correct.
>
> Q. And you filed an office action to overcome a rejection in the '592 prosecution; right?
>
> A. I believe that's right.

* * *

Q. The rejection involved the Roos patent; right?

A. That's right.

Q. The examiner had rejected the Roos patent because -- rejected your claims on the Roos patent because he thought that the Roos patent just -- would teach a conductive fluid; right?

A. I think that's right.

Q. *And you told him that it didn't; right?*

A. *Yeah, that's right.*

Q. *And at the time you told him that, you knew that Claim 1 of the Roos patent said liquid to provide electrical conduct[ance]; right?*

A. *I was familiar with the Roos patent. Correct.*

Q. *And that's what you -- you did not tell him about Claim 1, did you?*

A. Specifically about Claim 1?

Q. Right.

A. *I don't believe so.*

Mr. Raffle not only knew about the disclosure of claim 1 of the Roos '198 patent, but he also knew two other highly material things. First, it is undisputed that he also knew that Judge Orrick had specifically found that claim 1 of the Roos '198 patent disclosed electrically conductive fluid in connection with his earlier Memorandum Decision and Order of December 1, 1998 in the *ArthroCare v. Ethicon* case (Exhibit D, at 17):[6]

> The Court finds that the Roos '198 patent and the Elsasser and Roos article describe a bipolar electrosurgery device intended to be used in electrically conductive fluid, with electrical current flowing between the active and return electrodes through the fluid.

[6] This Opinion was also cited in Smith & Nephew's Answer and Counterclaims (D.I. 10) at paragraphs 15-18, 22-23.

Second, Mr. Raffle further knew, particularly as it was discussed in Judge Orrick's opinion, that Mr. Roos had published a paper with Dr. Elsasser (DTX-59A, -59B, Exhibits E and F) describing the use of one of the devices from the Roos '198 patent in 32 successful surgeries, in which the irrigation liquid was explicitly described as facilitating the passage of electrical current (DTX-59B at 7) (emphasis added):[7]

> The high frequency current ... flows directly from the active cutting electrode, through the tissue to be cut *and the irrigation liquid*, to the annular neutral electrode at the proximal end of the resectoscope shaft.

Yet Mr. Raffle didn't tell the PTO any of this, and intentionally chose not to provide this information to the Examiner. Instead, in his Amendment in response to the Office Action, he devoted nearly 2 1/2 pages of argument in an attempt to misdirect the Examiner away from his conclusion that the Roos '198 patent "must" inherently disclose electrically conductive fluid. (DTX-301 at 22-25).

As part of that argument, he referred the PTO to another Roos patent, U.S. Patent No. 4,706,667 ("the '667 patent", PX-605, Exhibit G), and argued that the '667 patent proved that electrically conductive fluid was not used in the Roos '198 patent (DTX-301 at 23-24). But what he also knew, and what he also never told the Examiner, was that ArthroCare had made the same argument in the *ArthroCare v. Ethicon* case, and that argument had been rejected by Judge Orrick. (Memorandum Decision and Order of December 1, 1998, at 17, Exhibit D):

> The Court notes that the device described in the Roos '667 patent was a specific device that may not have embodied all of the disclosure of the Roos '198 patent.

He also knew that the Elsasser and Roos article was more relevant to the Roos' 198 patent than the Roos '667 patent was. The Elsasser and Roos article described the

---

[7] It was also undisputed at trial that the Elsasser and Roos article disclosed the use of electrically conductive fluid. (*See* Tr. at 1299). The only admission that ArthroCare obtained from Dr. Taylor is that the article does not use either the word "saline" or the term "Lactated Ringers." (Tr. 1375-77) (D.I. 416).

use of one of the embodiments of the Roos '198 patent in 32 successful surgeries. Specifically, Dr. Taylor explained the connection as follows (Tr. at 1365) (D.I. 416):

> Q. And in the Roos and Elsasser article, the instrument that was used was essentially the instrument from Figures 7 and 8 of the '198 patent; right? That's the one that was used to perform the surgery?
>
> A. That configuration was the one that was used to perform the surgeries. They also tried another configuration, and I have forgotten which figure it refers to in the patent, that worked but not as well.

Yet, instead of explaining to the Examiner what Judge Orrick had found, or the relationship between the Elsasser and Roos article and the Roos '198 patent, Mr. Raffle made arguments that were contrary to Judge Orrick's findings. As such, Mr. Raffle clearly had the duty to disclose Judge Orrick's opinion under MPEP 2001.06(c): "Another example of such material information is any assertion that is made during litigation which is contrary to assertions made to the examiner." *See, e.g., Marlow Industries, Inc. v. Igloo Products Corp.*, 2002 WL 485698, at *5-6 (N.D. Tex. March 28, 2002) (granting summary judgment of inequitable conduct for failure to disclose court opinions), *aff'd, Rule 47.6*, 2003 WL 21212626 (Fed. Cir. May 23, 2003); *Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.*, 1999 WL 1077882, at 29-31 (N.D. Ill. Oct. 7, 1999) (opinion denying preliminary injunction in related litigation found to be material), *rev'd on other grounds*, 15 Fed. Appx. 836 (Fed. Cir. 2001); *Golden Valley Microwave Foods, Inc. v. Weaver Popcorn Co., Inc.*, 837 F.Supp. 1444, 1477 (N.D. Ind. 1992).

However, with respect to Judge Orrick's opinion, Mr. Raffle simply listed the opinion as the 40th in a list of 84 items that the Examiner could get if he asked for it, without bothering to send it to the PTO (DTX-300 at 121-30, *see* page 125) (Exhibit H). As such, Mr. Raffle failed to provide "[e]nough information ... to clearly inform the Office of the nature of these issues so that the Office can intelligently evaluate the need for asking for further materials in the litigation" as is expressly required by MPEP 2001.06(c).

d. The PTO Relied on Mr. Raffle's Arguments

As a result of Mr. Raffle's arguments included in the Amendment mailed on May 25, 2000 (DTX-301 at 18-25), the Examiner withdrew his rejections based on the Roos '198 patent (DTX-301 at 331-34). Thus, it is clear that the Examiner relied on Mr. Raffle's arguments, and that Mr. Raffle's arguments were material even under the "but for" standard, which is the highest standard for materiality ever considered by the Federal Circuit. *See American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1362 (Fed. Cir. 1984).

e. ArthroCare's Arguments are Unavailing

ArthroCare has made three arguments in an attempt to overcome Smith & Nephew's showing of inequitable conduct in connection with the '592 patent. (D.I. 428). All are unavailing.

i. The Jury Verdict is Not Relevant

The jury verdict has no relevance to Smith & Nephew's inequitable conduct contentions. ArthroCare has argued that Mr. Raffle's failure to disclose claim 1 of the Roos '198 patent is not material in light of the jury's verdict. (D.I. 428 at 7). ArthroCare may make the same argument with respect to Mr. Raffle's failure to discuss the Elsasser and Roos article. However, such arguments have no merit, for at least the following three reasons:

First of all, as fact finder for the inequitable conduct portion of the case, this Court has the obligation to evaluate the materiality of the withheld information independently. This is even more so where, as here, ArthroCare opposed submitting the question of inequitable conduct to the jury in its Motion *in Limine*. (D.I. 322). Further, the jury was not even instructed on the law relating to materiality or any portion of inequitable conduct.

Second, there is no way to know on what basis the jury made its decision. As set forth above, ArthroCare introduced no rebuttal evidence regarding the disclosure of

electrically conducting fluid in the Roos '198 patent, and Dr. Taylor did not waver with respect to his opinion during his cross-examination. Indeed, based on ArthroCare's cross-examination of Dr. Taylor, it appears that ArthroCare was trying to suggest that the Roos '198 patent did not disclose a "connector." (Tr. at 1370-72) (D.I. 416). Thus, the jury might well have decided that the Roos '198 patent did not anticipate the '536 patent because of lack of a connector.[8]

Finally, it is well settled that the standards for anticipation and materiality are different, and that a reference need not anticipate in order to be material. *See, e.g., PerSeptive Biosystems*, 225 F.3d at 1322 (stating that a patent may be valid and yet be rendered unenforceable due to inequitable conduct); *Molins PLC*, 48 F.3d at 1182 ("We recognize that [the withheld references] were cited eventually to the PTO and that the examiner initialed them and passed the reexamination application to issue thereafter. However, the references were not cited when they should have been.").

ii. The "Same Examiner" Argument is a Red-Herring

ArthroCare has also argued that there was no need to tell the Examiner about the disclosure of claim 1 of the Roos '198 patent, since the same Examiner that was considering the '592 application had also examined the Roos '198 patent. (D.I. 428 at 8 n.2). However, what ArthroCare fails to point out is that *23 years* had transpired since Examiner Cohen examined the Roos '198 patent, so there was no way to expect him to remember one line from a claim he had reviewed 23 years earlier.

In any event, at trial, Mr. Raffle squarely admitted that when he decided that he was not going to tell the Examiner about what was in claim 1 of the Roos '198 patent, he

[8] In view of the Court's interpretation of the term "connector" as "a structure that electrically links the electrode terminal to the high frequency power supply," (4/9/03 Memorandum Order at 2) (D.I. 353), ArthroCare's cross-examination of Dr. Taylor on this point was clearly intended to confuse and mislead the jury, since all RF devices would need to have such a connector to work.

did not base his decision on the fact that he was dealing with the same Examiner who examined the Roos '198 patent (Tr. 1541) (D.I. 417):

> Q. Okay. Examiner Cohen reviewed the application for the Roos '198 patent 23 years before the prosecution of the '592 patent; right?
>
> A. That might be. I don't remember the issue date of the Roos. That could be right.
>
> Q. When you decided that you weren't going to tell him about what was in Claim 1 of the Roos patent, did you have in mind that he must remember this 23 years later?
>
> MR. BLUMENFELD: Objection, your Honor.
>
> THE WITNESS: No.

iii. The Decision in the '536 Reexamination is Not Relevant

ArthroCare also argues that "four Patent Office examiners" have considered the Roos '198 patent, citing to the reexamination of the '536 patent. (D.I. 428 at 7). This argument is also not relevant. As we will show in the next section, there is no evidence that any one of those Examiners ever considered claim 1 of the Roos '198 patent.

f. Materiality

As shown above, the teaching of "liquid to provide electrical conductance" in claim 1 of the Roos '198 patent was highly material to the examination of the '592 patent. In addition, the Elsasser and Roos article and Judge Orrick's opinion -- which found that both the Roos '198 patent and the Elsasser and Roos article disclosed electrically conductive fluid -- were both also highly material. This information was material under any applicable standard, particularly in view of Mr. Raffle's contrary arguments. All of this information clearly meets the materiality requirements of the current version of 37 C.F.R. § 1.56(b)(2)(ii) since it "refutes, or is inconsistent with, a position the applicant takes in ... (ii) Asserting an argument of patentability." Indeed, by arguing as he did without submitting this contrary information Mr. Raffle clearly also violated MPEP 2001.06(c).

g. Intent to Mislead or Deceive

Accordingly, since Smith & Nephew has established that the "withheld information is material and the patentee knew or should have known of that materiality," there is an inference of intent to mislead, and ArthroCare and Mr. Raffle "can expect to have great difficulty in establishing subjective good faith sufficient to overcome [that] inference of intent to mislead." *Bristol-Myers Squibb*, 326 F.3d at 1239. Indeed here, as in *Bristol-Myers Squibb*, the requisite intent to mislead can be inferred simply from the facts that (a) Mr. Raffle knew of the significance of the withheld information, and (b) also knew of the duty to disclose. *Id.* 326 F.3d at 1240.

Thus, inequitable conduct in connection with the '592 patent is clear, and the '592 patent is unenforceable.

2. ArthroCare's Inequitable Conduct In Connection with the '536 Patent

With respect to the reexamination of the '536 patent, ArthroCare committed two types of inequitable conduct. The first relates to ArthroCare's failure to disclose Smith & Nephew's summary judgment briefs relating to the issue of invalidity, the Taylor expert report on invalidity and the Roos Declaration, as required by MPEP 2001.06(c).

The second is closely related to ArthroCare's inequitable conduct during prosecution of the '592 patent, and ArthroCare's arguments in overcoming the Roos '198 patent during such prosecution. In particular, this relates to Mr. Raffle's numerous off-the-record telephone conversations with the Examiner regarding the merits of the reexamination before a first Office Action on the merits and without filing timely interview summaries, all in clear violation of the applicable PTO rules.

With respect to the second ground for inequitable conduct, as discussed above, Smith & Nephew is seeking leave to take the deposition of the Examiner in the reexamination, Examiner Mendez, to determine the contents of these off-the-record communications. It is known that these off-the-record communications involved the

merits of the Roos '198 patent, and it is believed that in these off-the-record communications, Mr. Raffle may have convinced the Examiner to simply parrot back the arguments that Mr. Raffle had previously made with respect to the Roos '198 patent during prosecution of the '592 patent without performing any independent analysis.

a. The Duty to Disclose Information from Litigation

Prosecution of the reexamination of the '536 patent took place during the pendency of this lawsuit. Accordingly, the provisions of MPEP 2001.06(c) clearly apply. MPEP 2001.06(c) specifies that "any assertion that is made during litigation which is contradictory to assertions made to the examiner" is material, and must be disclosed:

> **Information From Related Litigation**
>
> Where the subject matter for which a patent is being sought is or has been involved in litigation, the existence of such litigation and any other material information arising therefrom must be brought to the attention of the U.S. Patent and Trademark Office. Examples of such material information include evidence of possible prior public use or sales, questions of inventorship, prior art, allegations of "fraud," "inequitable conduct," and "violation of duty of disclosure." Another example of such material information is any assertion that is made during litigation which is contradictory to assertions made to the examiner. *Environ Prods., Inc. v. Total Containment, Inc.*, 43 USPQ2d 1288, 1291 (E.D. Pa. 1997). Such information might arise during litigation in, for example, pleadings, admissions, discovery including interrogatories, depositions, and other documents and testimony.
>
> * * *
>
> Enough information should be submitted to clearly inform the Office of the nature of these issues so that the Office can intelligently evaluate the need for asking for further materials in the litigation.

MPEP 2001.06(c)

The knowing violation of MPEP § 2001.06(c) constitutes inequitable conduct. *See Boeringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 68 F.Supp2d 508, 549 (D.N.J. 1999) ("[A]though the opinions addressing inequitable conduct allegations based upon information gathered in related litigation are few in number, the opinions teach clearly that Rule 56 and traditional inequitable conduct law apply to information

gathered from related litigation").[9] Here, there is no question that both (a) ArthroCare and its representatives, including Mr. Raffle, knew about the requirements of MPEP 2001.06(c), and (b) violated MPEP 2001.06(c).

b. Knowledge of MPEP 2001.06(c)

First of all, ArthroCare's in-house patent attorney, Mr. Raffle, is already on record as knowing about the requirements of MPEP 2001.06(c). In particular, in connection with the previous '592 prosecution, Mr. Raffle filed a paper in the PTO explaining that a competitor had brought MPEP 2001.06(c) to his attention, and that he was submitting information to the PTO in accordance with the requirements of MPEP 2001.06(c). (DTX-300 at 122, Exhibit H).

Moreover, other representatives of ArthroCare, including its trial attorneys in this case, were also aware of the requirements of MPEP 2001.06(c). In particular, during the hearing on November 7, 2002, Smith & Nephew's counsel brought the requirements of the MPEP to the attention of ArthroCare's trial counsel (11/7/02 Hearing Tr. at 8-9) (D.I. 185):

> What happened here is that in the course of the reexamination, ArthroCare took all of the 73 prior art references that we cited and they also took the very first invalidity [ch]art that we served on the[m] and they sent it into the Patent Office. Now, there is a rule that requires this. It's in the MPEP as Rule 2001.1 [sic] and they sent it to them.
>
> Now, I should also mention in terms of what is going to happen in the future in the reexam. We have, since that initial invalidity chart, we have supplemented our invalidity contentions twice including with some new art that we discovered in the course of the case and because of that same rule, ArthroCare is required to submit that information to the Examiner as well so he'll review that and he could well come up with additional rejections.

However, during trial, Mr. Raffle squarely admitted that he did not submit Smith & Nephew's expert reports or summary judgment motions on invalidity (Tr. at 1542) (D.I. 417):

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[9] "Although MPEP § 2001.06(c) is not binding law, it is a useful tool to inform the Court of the [USPTO's] official interpretation of 1.56(b) regarding information brought to light during litigation." *Id.* at 548.

Q. Finally, with respect to material that you did and did not submit to the Patent Office in connection with the re-exam, it is true, isn't it, that you did not submit Smith & Nephew's arguments about validity as set forth in its expert reports, Dr. Taylor's expert report, or in its summary judgment motions; right?

MR. BLUMENFELD: Objection, your Honor.

THE WITNESS: That's correct. We did not submit the expert reports in [sic: and] the summary judgment motions.

c. Failure to Disclose Relevant Information from Litigation

Neither ArthroCare nor Mr. Raffle submitted Smith & Nephew's summary judgment briefs relating to the issue of invalidity (D.I. 258, 262, 283, 300, 302) or Dr. Taylor's expert report on the issue of invalidity (Exhibit I) (*see, e.g.*, Marsden Dec., Ex. 1, D.I. 264). Nor did ArthroCare submit the Declaration of Eberhard Roos (Exhibit J) that was submitted with Smith & Nephew's summary judgment motions (*see, e.g.*, Marsden Dec., Ex. 8, D.I. 267). Such information would have allowed the PTO to fully comprehend Smith & Nephew's invalidity contentions, particularly since they included far more detailed explanations of the prior art than anything that ArthroCare submitted. The Roos Declaration in particular would have been highly material in the reexamination in accordance with MPEP 2258(I)(E): "Affidavits or declarations which explain the contents ... of prior patents or printed publications in more detail may be considered in reexamination. ..."

d. ArthroCare's Confidentiality Excuse is Unavailing

ArthroCare has offered as an excuse for failing to disclose Smith & Nephew's expert reports and summary judgment briefs that those briefs were designated as confidential. (D.I. 428 at 11-12). Such an argument is not an excuse at all. In fact, ArthroCare's admission that it intentionally withheld the expert reports and summary judgment briefs on this ground instead actually demonstrates its intent to deceive in connection with the '536 reexamination. The fact that certain of Smith & Nephew's expert reports and summary judgment briefs were marked confidential does not offer

ArthroCare an excuse for failing to disclose the reports and briefs for at least the following five reasons:

(1) Not all of Smith & Nephew's expert reports were marked as confidential. The expert reports from Drs. Choti and Manwaring on the issue of invalidity were not marked as confidential. (Exhibits K and L respectively). When ArthroCare was deciding to withhold Dr. Taylor's expert report on the ground of confidentiality, it must have realized that the other expert reports were not confidential. Accordingly, the only inference to be drawn is that ArthroCare willfully and intentionally withheld that material from the Patent Office.

(2) In addition, the *only* information included within Dr. Taylor's expert report and Smith & Nephew's summary judgment briefs relating to invalidity that was confidential, was *confidential to ArthroCare*, not to Smith & Nephew. Accordingly, it was entirely up to ArthroCare's own decision as to whether or not it would disclose this information to the PTO. Clearly, ArthroCare would not have violated this Court's Stipulated Protective Order by fulfilling its duties of disclosure to submit its own information to the PTO.

(3) If ArthroCare had any doubt about whose confidential information was contained in the Taylor expert report and Smith & Nephew's summary judgment briefs, ArthroCare could have easily contacted Smith & Nephew to see if Smith & Nephew would consent to such disclosure. Of course, had ArthroCare contacted Smith & Nephew, Smith & Nephew would have explained that the only confidential information in those papers belonged to ArthroCare, and ArthroCare was of course free to disclose it to the PTO. In addition, ArthroCare also could have approached the Court if it had any uncertainty for a modification of the Protective Order. The Stipulated Protective Order in this case specifically permits the parties to file motions to seek such modification. (D.I. 40, ¶ 25).

(4) Of course, even with respect to the Taylor expert report and Smith & Nephew's summary judgment briefs, ArthroCare could have disclosed the portions that were not confidential, including, for example, the Roos Declaration. (Exhibit J).

(5) Finally, it should be noted that ArthroCare had no problem submitting Smith & Nephew's confidential information to the Patent Office in connection with the reexamination (*see, e.g.*, PX-7 at 277-78) (Exhibit M), so it really has no excuse for failing to submit its own confidential information.

e. Mr. Raffle's Off-The-Record Interviews

As the Court is already aware, Mr. Raffle had numerous "off-the-record" discussions with Examiner Mendez during prosecution of the '536 reexamination. (*See, e.g.*, D.I. 177 at 8-9, 15-19; D.I. 217). These off-the-record discussions were in clear violation of 37 C.F.R. § 1.560(a) and MPEP 2281, since they took place before a first Office Action on the merits. These discussions were also not summarized as required by 37 C.F.R. § 1.560(b) and MPEP 2281. The short "Statement" filed by ArthroCare (PX-7 at 228-30), certainly does not comply with the rule.

At this point, since Mr. Raffle had little memory about his conversations with the Examiner during his deposition, there is no way of knowing what Mr. Raffle said to the Examiner, unless Smith & Nephew is allowed to take the Examiner's deposition. All that is known is that *after* he spoke with Mr. Raffle, Examiner Mendez issued an Office Action in which he essentially parroted-back, verbatim, the entirety of Mr. Raffle's arguments made to Examiner Cohen during the earlier prosecution of the '592 patent. (Compare, PX-7 at 216-220 with DTX-301 at 22-25).[10]

It is clear, however, that Mr. Raffle once again did not *discuss* claim 1 of the Roos '198 patent with the Examiner during these discussions. Had he done so, surely the Examiner would have mentioned it, and explained why "liquid to provide electrical

[10] Also, see Exhibit P, which is the side-by-side comparison presented to Mr. Raffle during trial (Tr. at 1517-20) (D.I. 417), with the minor changes made by the Examiner to Mr. Raffle's arguments highlighted in yellow.

conductance" was not "electrically conducting fluid." However, claim 1 of the Roos '198 patent has never been mentioned in any paper issued by any Examiner in connection with the '536 reexamination, and accordingly, was never disclosed by Mr. Raffle.

In order to permit Smith & Nephew to determine just what was said by Mr. Raffle, the Court should grant Smith & Nephew leave to take Examiner Mendez' deposition.

f. Materiality

A Court must analyze information generated in litigation and determine whether that information was material to the pending application. *Boehringer*, 68 F.Supp.2d 548. The fact that ArthroCare provided some material information, the prior art, to the PTO does not preclude the possibility that the parties' arguments and expert opinions might also be material non-cumulative information under Rule 56(b). *Id.* at 550. Information is material when "[i]t refutes, or is inconsistent with, a position the applicant takes in (i) [o]pposing an argument of unpatentability relied on by the [Patent] Office, or (ii) [a]sserting an argument of patentability." 37 C.F.R. § 1.56(b)(2)(i)-(ii).

Smith & Nephew's expert reports and its summary judgment briefs on the issues of invalidity clearly constitute material information required to be disclosed under M.P.E.P. 2001.06(c). For example, Smith & Nephew's Opening Brief in Support of Its Motion for Summary Judgment of Invalidity Based on Prior Art (35 U.S.C. §§ 102 and 103) (D.I. 262) refutes the position ArthroCare took regarding the patentability of the claims of the '536 patent over the Roos '198 and other prior art references. During the prosecution of the '536 patent reexamination, ArthroCare argued for patentability over these references (PX-7 at 231-54). Smith & Nephew's summary judgment briefs and expert reports refute the patentability arguments made by ArthroCare. Therefore, these documents are clearly material and should have been submitted under MPEP §2001.06(c).

g. Intent to Mislead or Deceive

After analyzing the materiality of the prior litigation and ArthroCare's counsel's knowledge of its obligation to and failure to cite these material litigation documents, the next inquiry is whether there is a sufficient level of intent. *Boehringer*, 68 F. Supp.2d. at 550. ArthroCare's intent to mislead should be inferred from its limited disclosure of the present litigation and its failure to share highly material litigation documents with the PTO. *Id.* at 551 ("because Boehringer failed to disclose the arguments raised and the outcome of the preliminary injunction and summary judgment proceedings, an inference of deceptive intent on Boehringer's part sufficient to establish the substantial merit of Schering's defense may be inferred.")

Accordingly, the '536 patent should be found unenforceable due to inequitable conduct.

3. ArthroCare's Inequitable Conduct In Connection with the '882 Patent

Smith & Nephew's inequitable conduct contentions with respect to the '882 patent relate to the circumstances under which ArthroCare obtained the Certificate of Correction for claim 1 of the '882 patent.

This is the Certificate of Correction that changed the scope of claim 1 of the '882 patent by broadening the claim to reduce the number of electrodes that were required by the claim. Prior to the Certificate of Correction, claim 1 of the '882 patent required four electrodes: an electrode terminal, an active electrode, a return electrode, and an electrically conducting terminal. (JTX-2 at col. 24 lines 8-12, Exhibit N). However, after the Certificate of Correction, the claim required only two electrodes: an electrode terminal and a return electrode. (*See* Certificate of Correction attached to JTX-2). It was undisputed at trial that if the Certificate of Correction had not been obtained (or was invalid) Smith & Nephew would not infringe the '882 patent. (*See* testimony of ArthroCare's expert, Dr. Goldberg, (Tr. 1110) (D.I. 415)).

Mr. Raffle was seeking the Certificate of Correction in order to file suit against Ethicon. In obtaining the Certificate of Correction, Mr. Raffle made at least two affirmative misrepresentations, and also failed to explain how the so-called "correction" would broaden the claim when he clearly had a duty to do so. These inequitable conduct contentions are supported by the trial testimony of both Mr. Raffle and ArthroCare's expert Dr. Goldberg, as well as the file history for the '882 patent.

a. Facts Relating to '882 Prosecution

On December 17, 1997, Mr. Raffle, as ArthroCare's in-house patent attorney, submitted a Request for Certificate of Correction Under 37 CFR § 1.323. (DTX-306 at 234-35, Exhibit O). In that Request, Mr. Raffle sought to make changes to "claim 23" of the '882 patent. (*Id*).[11] In his Request for Certificate of Correction, Mr. Raffle made two key factual assertions which were shown to be *false* during the trial. Mr. Raffle also failed to explain how the so-called "correction" that he was seeking would broaden the scope of the claim, despite the fact that the Examiner had expressly relied on the narrow scope of the claim when he decided to allow the patent.

b. Mr. Raffle's First Misrepresentation

First of all, and as support for his argument that the changes he was seeking in the Certificate of Correction only involved correction of "typographical errors," Mr. Raffle falsely asserted that "[a]pplicant amended all of the claims to replace the term 'active electrode' with 'electrode terminal.'" (*Id.*). However, at trial, Mr. Raffle squarely admitted that this assertion was untrue. In particular, when confronted with the amendments he made to application claim 52 (which became patent claim 26) at the same

[11] Mr. Raffle was using an incorrect claim number. In a subsequent paper he filed on April 20, 1998, Mr. Raffle made clear that when he requested a correction to claim 23, he actually meant to request a correction to claim 1 instead. (DTX-306 at 239). Apparently, Mr. Raffle was referring to the application claim number, rather than the issued claim number, when he filed his Request for Certificate of Correction, since, as Mr. Raffle testified at trial, application claim no. 23 became issued claim 1 of the '882 patent. (Tr. at 1510) (D.I. 417). Thus, it should be clear that in Mr. Raffle's Request for Certificate of Correction Under 37 CFR § 1.323 which was filed on December 17, 1997, he was actually seeking to change claim 1 of the '882 patent not claim 23.

time that he amended application claim 23 (which became patent claim 1), Mr. Raffle was forced to admit that he in fact did not amend application claim 52 to replace "active electrode" with "electrode terminal" (Tr. 1511-1513) (D.I. 417) as he had told the PTO in his Request for Certificate of Correction.

The Request for Certificate of Correction alleges that the errors being corrected arose in connection with an amendment that Mr. Raffle filed during prosecution of the application for the '882 patent on March 25, 1997. Accordingly, it is useful to review that amendment. The amendment is included in DTX-306 at 200-10. (Exhibit O). For purposes of the inequitable conduct issue, it is useful to compare Mr. Raffle's amendment of application claim 23 (which became patent claim 1) with his amendment of application claim 52 (which became patent claim 26).[12] As can be seen, Mr. Raffle amended the claims that would become claims 1 and 26 so that they both included an "active electrode," a "return electrode," and an "electrode terminal." He admitted to this at trial (Tr. 1511-13) (D.I. 417):

> Q. Mr. Raffle, on Pages 204 and 205, there is the claim that became Claim 26 of the issued patent; correct?
>
> A Yes.
>
> Q. And at the same time, you made the changes to Claim 1, you also made changes to Claim 26; right?
>
> A. Yes.
>
> * * *
>
> Q. Now, in this claim you also left in the terms active electrode in the third line of the claim that became Claim 26; is that right?
>
> A. Yes, that's right.
>
> * * *

[12] A side-by-side comparison of Mr. Raffle's amendments to application claims 23 and 52 (which became patent claims 1 and 26 respectively) was used to cross-examine Mr. Raffle at trial. For the convenience of the Court, that comparison is included as Exhibit P.

Q. So just to review, in Claim 1, in the second -- in the third line, you changed active electrode to electrode terminal; right?

A. Yes.

Q. And in the third line of Claim 26, you left active electrode all alone. You didn't change it; right?

A. That's correct.

Q. Okay. And then in the sixth line of Claim 1, you left active electrode again all alone, didn't change it; right?

A. Correct.

Q. And in the corresponding sixth line of Claim 26, you changed active electrode to electrode terminal; right?

A. Correct.

There can be no doubt that Mr. Raffle *knew* that his statement in the Request for Certificate of Correction that "Applicant amended all of the claims to replace the term 'active electrode' with 'electrode terminal'" (DTX-306 at 234) was false. Indeed, when he filed his Request for Certificate of Correction, Mr. Raffle expressly represented that he had reviewed *all* of the "rest of the independent claims in this application" *including* claim 52 (which became patent claim 26). Moreover, when confronted with the fact that he did not change "active electrode" to "electrode terminal" at trial, Mr. Raffle expressed no surprise whatsoever. (Tr. at 1512) (D.I. 417).

c. Mr. Raffle's Second Misrepresentation

Mr. Raffle's Second Misrepresentation was a little more subtle. One of the requirements for a Certificate of Correction is that the error sought to be corrected must be clear. *See Superior Fireplace Co. v. Majestic Products Co.*, 270 F.3d 1358, 1370, 1372 (Fed. Cir. 2001). In an apparent effort to show that the error he sought to correct was clear, Mr. Raffle explained that there was an error in the antecedent basis for application claim 23 (DTX-306 at 234):

> This term on line 5 derives antecedent basis from "an electrode terminal" on line 3 (also note the reference to electrode terminal on lines 7 and 9 of claim 23). Accordingly, in order to correct this error in

antecedent basis, Applicant wishes to change "active electrode" on line 5 to "electrode terminal."

However, what Mr. Raffle did not point out to the PTO was that there were other instances in the claims of the '882 patent in which there was an improper antecedent basis *which were acceptable to ArthroCare.*

For example, during trial Mr. Raffle admitted that application claim 52 (which became issued claim 26) also included an improper antecedent basis, yet ArthroCare never sought a Certificate of Correction for that claim (Tr. 1541) (D.I. 417):

Q. On the certificate of correction, you did not ask to change Claim 26; right?

A. I believe that's correct, yes. Claim 26.

Q. As issued.

A. As issued. That's correct.

Q. You did not ask to correct that?

A. That's correct.

And as discussed above, it is clear that Mr. Raffle reviewed application claim 52 when he filed his Request for Certificate of Correction, because he expressly told the PTO that he did. (DTX-306 at 235).

d. Mr. Raffle's Omission

Finally, Mr. Raffle also committed inequitable conduct when he failed to explain that the Certificate of Correction would broaden the scope of the claim, despite the fact that he knew the Examiner had relied on the scope of the "uncorrected" claim when he decided to allow the patent to issue.

As is not uncommon, the Examiner provided a statement of his reasons for allowing the '882 patent to issue, which relied on the scope of application claim 23 as of June 22, 1997 -- i.e., before it was broadened by Mr. Raffle's Certificate of Correction (DTX-306 at 222):

The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose or suggest a method for applying

> energy to a target site on a patient body structure comprising providing an electrode terminal and a re .rn electrode electrically coupled to a high frequency voltage source; positioning the active electrode in close proximity to the target site in the presence of an electrically conducting terminal; and, applying a high frequency voltage between the electrode terminal and the return electrode, the high frequency voltage being sufficient to vaporize the fluid in a thin layer over at least a portion of the electrode terminal and to induce the discharge of energy to the target site in contact with the vapor layer.

As can be seen, the Examiner's Reasons for Allowance was clearly based on the "uncorrected" scope of application claim 23 as it essentially quotes that claim (compare the Reasons for Allowance with application claim 23 as set forth in the Amendment of March 25, 1997, DTX-306 at 201). Such a statement of Reasons for Allowance is "absolutely binding on the patentee, absent an objection by the patentee thereto." *Apex Inc. v. Raritan Computer, Inc.*, 187 F.Supp.2d 141, 155 (S.D.N.Y. 2002).

There can be no serious dispute that Mr. Raffle had received and was aware of the statement of Reasons for Allowance. First of all, Mr. Raffle was the attorney of record for the application. (*See, e.g.*, DTX-306 at 220). Second, the statement of Reasons for Allowance was attached to the Notice of Allowability which was sent to Mr. Raffle. (*See* DTX-306 at 221).

The statement of Reasons for Allowance included an invitation for comments or questions (DTX-306 at 222-23), but none were ever filed by Mr. Raffle. Instead of filing an objection to the statement of Reasons for Allowance, or pointing out that the Examiner's Reasons for Allowance was dependent on alleged "typographical errors" -- as any reasonable patent attorney would do if there really were typographical errors -- Mr. Raffle simply filed his Request for Certificate of Correction and never once mentioned that he was changing the scope of claim 1.

The Examiner obviously relied on Mr. Raffle's omission. In particular, in his Notes Re: Certificate of Correction, the Examiner checked the box marked "no" to the question that asked whether the changes would "[m]aterially affect the scope or meaning of the claims allowed by the examiner in the patent." (DTX-306 at 227). Clearly, if Mr.

Raffle had told the truth -- if Mr. Raffle had explained that the changes *would* affect the scope of the claim -- the Examiner would not have approved the Certificate of Correction as he did.

Throughout the pendency of this case, realizing that the Examiner had relied on Mr. Raffle's failure to tell the PTO that the Certificate of Correction changed the scope of claim, ArthroCare has strenuously argued that the Certificate of Correction did not change the scope of the claim. For example, during the hearing on claim construction and summary judgment held on April 1, 2003, ArthroCare's counsel argued that the Certificate of Correction did not broaden the claim. (Tr. at 163-64) (D.I. 335).

However, during the trial, ArthroCare's expert, Dr. Goldberg, squarely admitted that the Certificate of Correction did in fact broaden the scope of claim 1 of the '882 patent, contrary to the positions taken by ArthroCare (Tr. 1109-11) (D.I. 415):

Q. ... This is Claim 1 of the '882 patent as it issued; correct?

A. I believe -- yes, sir, that's correct.

Q. And as it issued, the claim required an electrode terminal, a return electrode, the active electrode and an electrically conducting terminal; right?

A. Those are the words in the finally printed original patent, sir.

Q. Those are four different electrodes in the printed patent; right?

A. At least three, sir.

Q. At least three? At least three, maybe four?

A. Yes, sir.

* * *

Q. ... Requiring three or four electrodes makes the claim narrower than requiring only two electrodes; right?

A. It would make it stricter to fulfill the criteria, yes.

Q. Stricter to fulfill [is] the same as narrower?

A. Yes.

e. Mr. Raffle's Motives

At the time that Mr. Raffle filed his first Request for Certificate of Correction, ArthroCare was preparing to file suit against Ethicon for infringement of several patents, including the '882 patent. ArthroCare in fact filed its lawsuit against Ethicon on February 13, 1998,[13] less than two months after Mr. Raffle filed his initial Request for Certificate of Correction. Indeed, it was apparently the pressure of the impending lawsuit that caused Mr. Raffle to (a) file his Request for Certificate of Correction on the day after the '882 patent issued, and (b) erroneously refer to application claim 23 rather than patent claim 1, as discussed above. Indeed, it was not until April 20, 1998, after the *ArthroCare v. Ethicon* case was well under way, that Mr. Raffle filed for a Certificate of Correction which referred to the correct claim number (claim 1, rather than claim 23). (*See* DTX-306 at 239).

Claim 1 of the '882 patent was obviously an important claim for Mr. Raffle in connection with ArthroCare's lawsuit against Ethicon. Claim 1 of the '882 patent was one of only eight total claims (from four patents) that ArthroCare asserted against Ethicon. (*See* Judge Orrick's Memorandum Decision and Order of December 1, 1998 in *ArthroCare v. Ethicon*, Exhibit D, at 2).

f. Materiality

Materiality of the information that was misrepresented or omitted by Mr. Raffle is beyond dispute. Had Mr. Raffle told the PTO that his Certificate of Correction would actually broaden the claim, and was contrary to the Examiner's statement of Reasons for Allowance, the Certificate of Correction clearly would not have issued. Similarly, had Mr. Raffle told the PTO that at the very same time he made what he now calls "typographical errors" in application claim 23, he determined that the very same kind of

[13] A copy of the Complaint from the *ArthroCare v. Ethicon* case is attached as Exhibit Q and a copy of the docket from that case is attached as Exhibit K. Smith & Nephew asks the Court to take judicial notice of these facts.

so-called "errors" in application claim 52 were acceptable, the Certificate of Correction would not have issued.

g. Intent to Mislead or Deceive

As is typical in cases in which inequitable conduct is found, the intent to deceive here may be inferred from the surrounding circumstances. *Bristol-Myers Squibb*, 326 F.3d at 1239 ("Intent to mislead does not require direct evidence, and is typically inferred from the facts."); *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 882 F.2d 1556, 1562 (Fed. Cir. 1989).

Here, Mr. Raffle was clearly trying to broaden claim 1 of the '882 patent so that ArthroCare could file its impending lawsuit against Ethicon. Further, his attempts succeeded in obtaining a Certificate of Correction that in fact broadened claim 1 of the '882 patent. In *General Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405 (Fed. Cir. 1994), the Federal Circuit held that "as a matter of law [ ] a false statement in a petition to make special is material if, as in this case here, it succeeds in prompting expedited consideration of the application." *Id.* at 1411. In the present case, the Certificate of Correction is even more material than the petition to make special. First, a petition to make special merely impacts the procedural working of the PTO. Second, and more importantly, a Certificate of Correction is closely related to the validity of the patents-in-suit. As such, ArthroCare's mere denial of its intent to mislead the PTO is not sufficient to overcome the strong materiality of Mr. Raffle's omissions. *Id.* at 1411.

Accordingly, the '882 patent should be declared unenforceable due to inequitable conduct.

C. ArthroCare's Inequitable Conduct In Connection with Any One or Two Of the Patents Taints the Other Patent(s)

The Federal Circuit has identified a two-factor test for finding related patents unenforceable: (1) inequitable conduct or unconscionability exists and (2) the inequitable conduct had a direct "relation" to the requested relief. *Consolidated Aluminum v. Foseco*

International, 910 F.2d 804, 810 (Fed. Cir. 1990) (citing *Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240 (1933)). In *Consolidated Aluminum*, the Federal Circuit found inequitable conduct sufficient for the court to hold all of the patents-in-suit unenforceable because the conduct at issue had a direct relationship to those patents. *Id.* at 812. The court noted that the prosecution histories of the patents-in-suit were intertwined and that two of the patents were continuations-in-part of the third patent. *Id.*

As in *Consolidated Aluminum*, the patents-in-suit in the present case are closely related such that a finding of inequitable conduct during the prosecution of the '592 patent, the '882 patent or the '536 reexamination would render all three patents-in-suit unenforceable. First and foremost, the patents are genealogically related descendants of the same original patent applications. The three patents share the same inventors, relate to the same electrosurgical system, have been licensed together, and were asserted together in this litigation.

In addition, the conduct at issue with regard to the '592 and '882 patents and the '536 reexamination bears an "immediate and necessary relation" to the equity sought by the patentee, namely the enforcement of the other patents-in-suit, to render them similarly unenforceable. *Id.* at 811-12. The patents-in-suit are so closely related that prior art relevant to any one of these is clearly relevant to each of the others. Likewise any misrepresentation made regarding a prior art reference or the scope of the claims in the prosecution of one patent could have an impact on the other two.

Moreover, all three patents share common claim terms. Thus, any argument by ArthroCare or statement by the Examiner that may have been made but for ArthroCare's inequitable conduct, would necessarily affect the other two patents as well.

1. ArthroCare's Inequitable Conduct In Connection With The '592 Patent Taints the Enforceability of the Other Patents-in-Suit

ArthroCare's misrepresentations to the PTO regarding the disclosure of the prior art Roos '198 patent during the prosecution of the '592 patent is related to the validity of

both the '882 and '536 patent. Specifically, to the extent that ArthroCare's conduct misrepresents the significance of the Roos '198 patent as prior art to the '592 patent, this conduct also misrepresents the significance of this art to the other two patents, makes it less likely that the other two patents will be subject to reexamination, and has the potential to impact or taint any reexamination proceeding that may occur for either of these patents. This is exactly what in fact happened with respect to the '536 patent, and could happen with respect to the '882 patent.

ArthroCare's misrepresentations regarding the Roos '198 patent were made in an argument for patentability in an office action response during the prosecution of the '592 patent. This multi-page argument also appears in the '536 reexamination almost verbatim in an office action filed by the Examiner despite the fact that the argument is not made in any recorded ArthroCare submission during the reexamination. (Exhibit S) (Tr. 1516-1521) (D.I. 417). An Examiner's use of ArthroCare's earlier misrepresentations and arguments from the '592 patent prosecution shows that these misrepresentations are also directly related to the '536 reexamination and in fact had an impact on those proceedings, and could well have a similar impact with respect to proceedings concerning the '882 patent.

Moreover, had ArthroCare disclosed the language of claim 1 of the Roos '198 patent as it was required to do, the ensuing prosecution could well have affected the interpretation of "electrically conductive fluid," a claim element which also appears in the '882 and '536 patents as well.

A finding of inequitable conduct during the prosecution of the '592 patent should render all three patents-in-suit unenforceable.

2. ArthroCare's Inequitable Conduct In Connection With The '536 Patent Taints the Enforceability of the Other Patents-in-Suit

ArthroCare's inequitable conduct during the reexamination of the '536 patent also is related to and taints the validity of the other patents-in-suit. ArthroCare's failure to

provide the PTO with relevant litigation-related documents concern all of the patents-in-suit. These documents provide relevant information concerning the prior art references material to all three of the patents-in-suit that could affect the validity of the claims of any or all of the three patents-in-suit. For example, Smith & Nephew's Opening Brief in Support of Its Motion for Summary Judgment of Invalidity Based on Prior Art (35 U.S.C. §§ 102 and 103) (D.I. 262) provides material arguments regarding the validity of the claims of all three patents-in-suit over various prior art references.

Misrepresentations and omissions relating to prior art in the proceedings of one patent taints the validity of closely related patents when such prior art is also relevant to the claims of the closely related patents. Here, the arguments made by ArthroCare relate to many of the claim terms that appear in the '592 and '882 patents as well. ArthroCare's violation of MPEP 2001.06(c) hid material information regarding prior art disclosures relevant to all three patents-in-suit, the scope of the claims of all three patents-in-suit, and the meaning of many terms common to all three patents-in-suit.

A finding of inequitable conduct during the prosecution of the '536 reexamination should render all three patents-in-suit unenforceable.

3. ArthroCare's Inequitable Conduct In Connection With The '882 Patent Taints the Enforceability of the Other Patents-in-Suit

Finally, ArthroCare's inequitable conduct during the examination of the '882 patent also is related to and taints the validity of the other patents-in-suit. ArthroCare's misrepresentations and omissions relating to the Certificate of Correction in the '882 patent constitute inequitable conduct as described above. These misrepresentations and omissions are related to the claims of the '592 and '536 patents. Specifically, they relate to the meaning of the terms "active electrode" and "electrode terminal" used in all three of the patents-in-suit. Any change in the prosecution which might affect the interpretation of either of these claim terms in the '882 patent would also affect the same terms in the other patents.

Thus, a finding of inequitable conduct during the prosecution of the '882 patent should render all three patents-in-suit unenforceable.

V. CONCLUSION

For all of the foregoing reasons, Smith & Nephew respectfully requests that the patents in suit be declared unenforceable due to inequitable conduct.

Dated: June 9, 2003

FISH & RICHARDSON P.C.

By: _____

William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
919 N. Market Street, Suite 1100
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Kurtis D. MacFerrin
500 Arguello Street, Suite 500
Redwood City, CA 94063
Telephone: (650) 839-5070

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

CERTIFICATE OF SERVICE

I hereby certify that on this 9th day of June, 2003, a true and correct copy of SMITH & NEPHEW'S OPENING BRIEF IN SUPPORT OF ITS INEQUITABLE CONDUCT CASE was caused to be served on the attorneys of record at the following addresses as indicated:

BY HAND DELIVERY
Jack B. Blumenfeld, Esq.
Morris, Nichols, Arsht & Tunnell
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899-1347

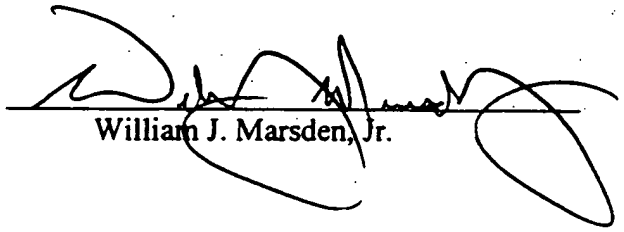
Attorneys for Plaintiff
Arthrocare Corporation

BY FEDERAL EXPRESS
Matthew D. Powers
Jared Bobrow
Perry Clark
WEIL, GOTSHAL & MANGES LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065 -1175

Attorneys for Plaintiff
ArthroCare Corporation

BY HAND DELIVERY
Steven J. Balick, Esquire
Ashby & Geddes
222 Delaware Avenue
Wilmington, DE 19801

Attorneys for Counterclaim Defendants,
Ethicon, Inc.



William J. Marsden, Jr.

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	C.A. No. 01-504-SLR

SMITH & NEPHEW'S OPENING BRIEF IN SUPPORT OF ITS RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW

Dated: June 30, 2003

FISH & RICHARDSON P.C.
William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
Eugene B. Joswick (#4271)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Mark J. Hebert
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Kurtis D. MacFerrin
500 Arguello Street, Suite 500
Redwood City, CA 94063
Telephone: (650) 839-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

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STATUTES

I. NATURE AND STAGE OF THE PROCEEDINGS

For the Nature and Stage of the Proceedings, please see Smith & Nephew's Opening Brief in Support of Its Motion for a New Trial, filed concurrently.

II. SUMMARY OF THE ARGUMENT

ArthroCare failed to introduce evidence to show that Smith & Nephew itself directly infringes, contributes to the infringement by others, or actively induces infringement by others of any of the claims in suit. Since ArthroCare bears the burden of proving each of these allegations, its failure to carry these burdens requires judgment as a matter of law (JMOL) for Smith & Nephew on the following issues:

(1) Neither Smith & Nephew's accused probes nor the use of these probes infringe the patents-in-suit under the doctrine of equivalents.

(2) Smith & Nephew does not directly infringe the method claims of the '592 and '882 Patents.

(3) Smith & Nephew's accused probes do not infringe the claims of the '536 patent because ArthroCare failed to prove these probes include all of the elements required by the '536 patent within an "electrosurgical system" as required by the claims.

(4) Smith & Nephew's accused probes do not infringe the claims of the '592 patent because ArthroCare failed to prove that the accused probes satisfy the requirement that "the return electrode is not in contact with the body structure" or the requirement of "spacing a return electrode away from the body structure". Similarly, Smith & Nephew's accused probes do not infringe claim 47 of the '536 patent because ArthroCare failed to prove the return electrodes on the probes are "sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue".

(5) Smith & Nephew's accused probes do not infringe the claims of the '882 patent because ArthroCare failed to prove that the accused probes have "an electrode terminal," "a return electrode," "an active electrode," and "an electrically conducting terminal," all of which are required because the Certificate of Correction is not valid.

(6) Non-suction models of Smith & Nephew's Saphyre products do not infringe claim 54 of the '882 patent because they do not "evacuat[e] fluid generated at the target site with a suction lumen having a distal end adjacent the electrode terminal".

(7) Smith & Nephew is not liable for contributing to the infringement of any claim of the patents-in-suit.

(8) Smith & Nephew is not liable for inducement of infringement of any claim of the patents-in-suit.

Moreover, no reasonable jury could find that Smith & Nephew did not prove—with clear and convincing evidence—that each of the asserted claims is invalid as anticipated and/or non-enabled. Entry of JMOL is therefore appropriate. Specifically:

(9) ArthroCare presented no expert testimony or any other evidence to rebut Smith & Nephew's evidence that six prior art references anticipate the asserted claims. Nor did ArthroCare dispute the prior art status of any of Smith & Nephew's invalidating art.

(10) Rather than present an answering case on validity, ArthroCare's counsel relied exclusively on an incomplete and cursory cross-examination of Smith & Nephew's expert, Dr. Taylor. Because this cross-examination fell far short of establishing any basis on which a reasonable jury could have found for ArthroCare on validity, Smith & Nephew is entitled to judgment as a matter of law. ArthroCare merely threw up a smoke screen of alleged "concessions by Dr. Taylor," and succeeded in confusing the jury. This confusion is highlighted best by the Pao '499 patent, which Smith & Nephew showed anticipated claims 46 and 56 of the '536 patent. ArthroCare's cross-examination on this point was limited to an element present only in claim *47*, against which Pao ***was not even asserted***. Nonetheless, the jury—apparently confused by ArthroCare's misleading cross-examination and argument—found Pao did not anticipate claims 46 and 56.

(11) Likewise, ArthroCare presented no evidence to rebut Smith & Nephew's clear and convincing evidence that the '882 patent is invalid for lack of enablement. ArthroCare

asserts that the '882 patent discloses a new phenomenon of physics called "coblation" (as assert it ArthroCare must, because otherwise the '882 patent merely describes well-known electrosurgical techniques from the prior art). But despite saying that this "coblation" phenomenon is highly dependent on very exact parameters, the specification does not describe those parameters with specificity. Thus, to the extent that the '882 is not invalid as being anticipated by the prior art, it is invalid for lack of enablement.[1]

III. CONCISE STATEMENT OF FACTS

The facts related to each of the grounds upon which Smith & Nephew moves for judgment as a matter of law are addressed in each of the corresponding sections of the argument.

IV. ARGUMENT

A. Applicable Legal Standards

Entry of judgment as a matter of law (JMOL) is appropriate where "the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury's verdict cannot in law be supported by those findings." *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998). The question is not whether there is "literally no evidence" supporting the non-moving party, *Lifescan, Inc. v. Home Diagnostics, Inc.*, 103 F. Supp. 2d 345, 350-51 (D. Del. 2000), but whether the evidence ***reasonably*** supports the jury's verdict. *Gomez v. Alleghany Health Servs. Inc.*, 71 F.3d 1079, 1083 (3d Cir. 1995).

District courts grant JMOL if, upon the record before the jury, reasonable jurors could not have reached that verdict. Fed. R. Civ. P. 50; *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984). In deciding whether to grant JMOL on any issue after a jury has returned a verdict, the court determines whether substantial evidence exists in the record to support the jury's verdict when the correct legal standard is applied. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 975 (Fed.

[1] In addition to the specific grounds of JMOL discussed in detail herein, Smith & Nephew also renews and reserves all of its arguments with respect to claim construction as set forth in its claim

Cir. 1995), *aff'd*, 517 U.S. 370 (1996). Substantial evidence is the quantum of evidence that reasonable jurors would accept as adequate to support the finding under review. *Perkin-Elmer*, 732 F.3d at 893.

JMOL should be granted if "a party has been fully heard on an issue and there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue." Fed. R. Civ. P. 50(a); *see Northview Motors, Inc. v. Chrysler Motors Corp.*, 227 F.3d 78, 88 (3rd Cir. 2000). In a patent infringement action, "JMOL of non-infringement is properly granted if no reasonable jury could have concluded that a limitation recited in the properly construed claims is found in the accused device, either literally or under the doctrine of equivalents." *Medtronic, Inc. v. Advanced Cardiovascular Systems, Inc.*, 248 F.3d 1303, 1309 (Fed. Cir. 2001).

To overcome a motion for JMOL, the non-moving party must point to "substantial evidence" to support a finding in its favor. *See Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1329 (Fed. Cir. 1991). Merely "offhand and conclusory statements" are not sufficient to overcome the motion. *Id.* at 1327.

The patent owner bears the burden of proving infringement (by a preponderance of the evidence) that the accused device, or use of that device, has all the limitations of the asserted claims. *Novartis Corp. v. Ben Venue Labs., Inc.* 271 F.3d 1043, 1046 (Fed. Cir. 2001).

B. Smith & Nephew's Accused Probes And The Use Of These Probes Do Not Infringe The Patents In Suit Under The Doctrine Of Equivalents

ArthroCare introduced ***no*** evidence of infringement under the doctrine of equivalents, and JMOL on this issue should be granted. ArthroCare attempted to introduce evidence regarding equivalent infringement for the first time during redirect examination of its expert Dr. Goldberg. The Court properly excluded this belated "rebuttal" evidence. (D.I. 415 at 1144). In making the ruling, the Court stated that ArthroCare should have brought the matter up during direct examination and that, even if it had, the testimony would not have been permitted because the equivalence analysis in Dr. Goldberg's report was insufficient. (*Id.*). Thus, judgment as a

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construction brief (D.I. 246 and 282), to the extent that the Court adopted a different claim construction from that set forth by Smith & Nephew.

matter of law that Smith & Nephew does not infringe any claim of any patent-in-suit under the doctrine of equivalents should be granted.

C. Smith & Nephew Does Not Directly Infringe The Method Claims Of The '592 And '882 Patents

ArthroCare failed to provide ***any*** evidence that Smith & Nephew itself uses or has used the Saphyre, ElectroBlade, or Control RF probes in surgery as required by the claims of the '592 and '882 method patents. "A method claim is directly infringed ***only by one practicing*** the patented method." *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) (emphasis added). ArthroCare has offered no evidence from which a reasonable jury could conclude that Smith & Nephew uses its Saphyre, ElectroBlade, or Control RF probes to perform each step of the methods covered by ArthroCare's claims. Indeed, the only evidence at trial was that Smith & Nephew does not use the accused probes. (*See, e.g.*, D.I. 414 at 961). Thus, the Court should enter judgment as a matter of law that Smith & Nephew does not directly infringe any claim of the '882 or '592 patent.

D. The '536 Patent

1. JMOL Of Non-Infringement Of The Claims Of The '536 Patent Is Appropriate Because ArthroCare Failed To Prove That These Probes Are Used As Part Of The "Electrosurgical System"

Claim 45 of the '536 patent, and the claims that depend from it (asserted claims 46, 47, and 56) claim an electrosurgical system, which includes its own fluid supply. Specifically, the '536 patent is directed to an electrosurgical system that can be used in open surgery -- *e.g.*, surgery in a dry environment -- because "[e]lectrically conductive liquid, such as isotonic saline, is directed through a fluid path past a return electrode and to the target site to generate a current flow path." (JTX-1, col. 3, lines 26-30). As described in the Summary of the Invention:[2]

> The above described method is particularly effective in a dry environment (i.e., the tissue is not submerged in fluid), such as open, laparoscopic or oral surgery, because the electrically conducting liquid provides a suitable current flow path from the target site to the return electrode.

[2] The Summary of the Invention is an optional part of the patent application. "Such summary should, when set forth, be comensurate with the invention as claimed..." 37 C.F.R. §1.73.

(*Id.* at col. 3, lines 37-41). This is distinct from arthroscopic surgery, in which the joint is filled with saline (which is a biocompatible fluid) in order to move the soft tissue out of the way of the surgeon and wash out debris that is produced during the operation. Such a supply of saline in arthroscopic surgery is completely separate from any electrosurgical instrument, and the saline is typically supplied by either an IV bag or a separate system such as the Intellijer.

The Court construed the term "system" in claim 45 of the '536 patent to mean "an assemblage or combination of things or parts forming a unitary whole." (D.I. 354). The claims require that the system include several elements, including "an electrically conducting fluid supply for directing fluid to the target site, "which thus must all be part of the "unitary whole." However, ArthroCare's expert ignored the Court's construction and the requirement that an electrically conducting fluid supply for directing fluid to the target site be part of the claimed system -- *i.e.*, as part of a "unitary whole"—such that the system could be used in open surgery.

Dr. Goldberg testified:

> Q. Now, is the Saphyre bipolar ablation probe used as part of an electrosurgical system?
>
> A. Yes, sir, it is.
>
> * * *
>
> Q. Now, is the electrically conductive fluid supply physically connected to this probe that we've been looking at?
>
> A. Not this probe, sir.
>
> Q. So how is it then that this probe is part of a system that includes electrically conductive fluid?
>
> A. Again, ***my understanding of a system*** is that things don't have to be physically in contact. Another example that just came to mind is when we have a wireless computer system or an audio system, the mouse doesn't have to be connected by a wire to the computer to be part of the same system. They're all functioning to put in the data or to listen to the stereo. So ***it doesn't have to be part of, physically connected.*** The electrical fluid in the joint will get there. The surgeon has to fill the entire joint to distend it and the fluid will get there. It's all part of the system, sir.

(D.I. 411 at 398-399) (emphasis added).

In his testimony, Dr. Goldberg clearly failed to apply the Court's construction of the term "system." He never described how the Saphyre and a separate fluid supply form an "assemblage or combination of things or parts forming a unitary whole." Instead, he actually disavowed and disagreed with the Court's claim construction, and said that "it doesn't have to be part of, physically connected." (*Id.*). Since he did not agree with the Court's claim construction, he obviously did not provide any evidence that was in accordance with the Court's claim construction. Instead, all he said was that "the fluid will get there." (*Id.*). But he didn't say how.[3]

These omissions became even more apparent during Dr. Goldberg's testimony regarding the individual claim elements. For each of the accused products, Dr. Goldberg testified that the product comprises the first two elements of the system required by claim 45. However, Dr. Goldberg's analysis ignored the third element of the system, the electrically conducting fluid supply. For the Saphyre, Dr. Goldberg testified:

> And there is electrically conducting fluid supplied because this is arthroscopy and there is electrically conductive fluid delivered by the surgeon and the people in the operating room to the joint.

(D.I. 411 at 447). This testimony is very misleading because Dr. Goldberg, and ArthroCare continually focused on arthroscopic surgery. But the claims are not so limited. In fact, if one were to use the Saphyre in, for example, an oral surgery such as described in the Summary of the Invention of the '536 patent[4] the device would not work because the Saphyre does not have a fluid supply as part of its system. Dr. Goldberg actually recognized this in his experimentation with the Saphyre product (*Id.* at 416):

> Q. You mentioned that you also tested the Saphyre when the return electrode was in air and the active electrode was in saline; is that right?
>
> A. Yes, sir.
>
> Q. Can you describe for the jury what happened when you used the Saphyre probe in that mode?

[3] Likewise, for the Control RF and ElectroBlade products, Dr. Goldberg failed to provide any evidence that the products are a "system" as required by Claim 45.

A. It didn't work.Thus, any testimony that the Saphyre probe includes the fluid supply simply because it is designed for arthroscopic surgery is misleading and incorrect.

For the Control RF, Dr. Goldberg did not even mention a fluid supply and simply said (*Id.* at 448):

> There is electrically conductive fluid, as well as a current flow path when the generator is on.

Similarly, for the ElectroBlade, instead of describing a fluid supply (Tr. at 449):

> Up the shaft is a return electrode. It's connected to the generator and it's in electrically conductive fluid and there is a current flow path through the electrically conductive fluid at the time the generator was activated.

While the Smith & Nephew probes are used in the presence of saline or other electrically conducting fluids, that fluid is not supplied to the target site by the probes. (D.I. 415 at 976 and 1013). Fluid, typically from an IV bag, is instead introduced by a separate and distinct piece of medical equipment such as the cannula that is also used for the videoarthroscope. (D.I. 414 at 815-16; D.I. 268, Ex. 43). That separate piece of equipment is not part of the "electrosurgical system." The Smith & Nephew probes and fluid supply are not part of the same assemblage or combination of things or parts forming a "unitary whole."[5]

Moreover, ArthroCare introduced no evidence that the alleged system included a fluid supply "for directing fluid to the target site." Instead, the testimony was uncontroverted that the purpose of the fluid supply used with the Smith & Nephew probes was instead to flood the inside of the joint in order to move soft tissue back and also to wash out debris. (D.I. 414 at 780-81 and 790)

[5]With respect to ArthroCare's attempt to argue that the separate Smith & Nephew Intellijet fluid supply system was part of an "electrosurgical system," that evidence was limited to the "System Configuration" contained in the ElectroBlade IFU. (D.I. 411 at 497; PX 189). However, Karen Drucker testified that this System Configuration is for compliance with European regulations. Thus, to the extent this evidence is taken to support the inference that the ElectroBlade and the Intellijet, used in this configuration, are an "electrosurgical system," it is only evidence for their use in Europe. Moreover, Ms. Drucker explained that IFU showed that the Intellijet system was not completely separate from the ElectroBlade system. (D.I. 415 at 1018).

Since the probes each lack the fluid supply element as part of the electrosurgical system as required by the claims, they cannot directly infringe these claims.[6] *See KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1358-59 (Fed. Cir. 2000); *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991) ("To establish infringement, every limitation set forth in a patent claim must be found in an accused product or process exactly or by substantial equivalent."). Because ArthroCare failed to present evidence by which a reasonable jury could find that any of the accused products satisfies the "system" requirement of claim 45 that is incorporated into asserted claims 46, 47, and 56, JMOL of non-infringement of these claims is proper.

E. The '592 Patent

1. Smith & Nephew's Accused Probes Do Not Infringe The Claims Of The '592 Patent Because ArthroCare Has Failed To Prove That The Accused Probes Satisfy The Requirement That "The Return Electrode Is Not In Contact With The Body Structure" Or The Requirement Of "Spacing A Return Electrode Away From The Body Structure"

Claim 1 of the '592 patent requires "positioning a return electrode ... such that [it] is not in contact with the body structure" and claim 23 requires "spacing a return electrode away from the body structure." The Court construed these terms to mean that "the return electrode is not to contact the body structure ***at all during the performance of the claimed method.***" (D.I. 353) (emphasis in original).[7]

ArthroCare's expert, Dr. Goldberg, again ignored the Court's claim construction when he rendered his opinion that the Smith & Nephew probes infringe:

> Q. Now, does that portion of the claim as construed by the Court require that the Saphyre bipolar ablation probe return electrode never contact the tissue during the course of an entire arthroscopic procedure?
>
> A. No, it doesn't. Mr. Bobrow, you raised a very important --

[6]And, as discussed above, ArthroCare has completely failed to provide any evidence that a separate fluid supply is in any way equivalent to a unitary whole.

[7]Claim 47 of the '536 patent includes a similar limitation which reads "the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue." Thus, Smith & Nephew submits that ArthroCare failed to prove infringement of that claim for the same reasons.

* * *

A. I was about to try to explain to the members – the ladies and gentlemen of the jury as to why this is a very important point. The claim is talking about a method for applying electrical energy, so the issue is whether or not a device infringes when the electrical energy is not — when it is being applied. There are a lot of parts to a surgery, including putting in the camera, taking out the camera, taking care of the patient that don't involved applying electrical energy. So the key is, is this method being infringed when it's fulfilling the claim which is when the energy is being applied? ***So the only way not to infringe this claim with the device is to make sure that the return electrode —***

* * *

is always in contact when the energy is on. And as the videotape and Mr. Marsden suggested, very clearly there is occasional contact frequently, but often there isn't. The probe is designed to enable they're not being contact. If it's not in contact, it's being infringed.

(D.I. 411 at 421-22) (emphasis added).

Dr. Goldberg's testimony that the use of Smith & Nephew's products infringe the claims of the '592 patent is based on ArthroCare's previously-rejected interpretation of the claim term, rather than the Court's construction. Specifically, by stating that the "only way not to infringe this claim with the device is to make sure that the return electrode ... is ***always*** in contact when the energy is on," Dr. Goldberg is appling ArthroCare's temporal limitation that the Court specifically rejected. (D.I. 352, p. 6) ("Both parties have proposed a claim construction that improperly imports a time limitation into the claim. The claim limitation in dispute has no relation to the time required to perform the method.").

The following chart demonstrates how Dr. Goldberg has ignored the Court's construction and continued to apply ArthroCare's original and now rejected construction:

ArthroCare's Rejected Argument	**Dr. Goldberg's Testimony**
"Smith & Nephew's proposed experts have not offered any evidence or opinion that the return electrode of the Saphyre is ***always contacting*** patient tissue during use." (D.I. 252 at 12) (emphasis added).	"the only way not to infringe this claim with the device is to make sure that the return electrode ... is ***always in contact*** when the energy is on." (Tr. at 421-22) (emphasis added).

Further the Court's claim construction refers to the performance of ***all three*** steps of the method. Only one of those steps requires the application of RF energy. However, Dr. Goldberg and ArthroCare completely ignored the first step of the method -- "positioning the electrode

terminal into at least close proximity with the target site." (JTX-3, claims 1 and 23). Both ArothroCare and Dr. Goldberg ignored return electrode contact with the tissue when the probe is being positioned before the RF energy is being applied. This misleading view is evident when Dr. Goldberg states "when we're talking about ***activation of energy, which is what the claims are referring to***, they're limiting it to ***two very small periods of time.***" (D.I. 415 at 1119) (emphasis added). But the Court's claim construction expressly rejected any time limit, and certainly is not limited to the time period of activation of energy. Thus, Dr. Goldberg's assertion of "what the claims are referring to" is simply incorrect.

In fact, ArthroCare introduced absolutely no evidence that the method of using the accused products met these limitations of the '592 patent under the Court's claim construction. Indeed, even all of its cross-examination of Smith & Nephew's witnesses was based upon the erroneous claim construction which ArthroCare had proposed, and which the Court had rejected. (*See, e.g.*, D.I. 415 at 983 and 1035-36).

Instead, under the Court's claim construction, *all* of the evidence at trial showed that the return electrode frequently contacted tissue at various times when one or more of the three steps of the method was being practiced. As can be seen in the various sales-training videos (DTX 315, DTX 316, and DTX 897), the three steps of the method are continually being practiced -- if the power is not being applied, the active electrode is being positioned for the next time that the surgeon applies the power.[8] Thus, Dr. Goldberg's and ArthroCare's evidence was not based on the Court's claim construction and cannot support a verdict of infringement.

The confusion regarding the time period in which one analyzes the use of the accused devices was further compounded in ArthroCare's closing argument, in which Mr. Bobrow misleadingly argued:

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[8] ArthroCare attempted to mislead the jury when it twicestopped the Saphyre video at an instant in the middle of the performance of the claimed method when the return was not contacting tissue (D.I. 415 at 985), and suggested this was proof of infringement. The Court's claim construction was clear: the return electrode is not to contact the body "at all" during performance of the method and the method is not complete until all three steps are performed.

> There is no minimum time period. If energy is applied for three seconds and the return electrode is not in contact for those three seconds, and the active electrode is close to the tissue, and RF energy is applied and all the other language is met, this is satisfied. This is satisfied.
>
> Now, ***if in the fourth second, it hits the tissue, well, then it's not practicing the method.*** But if in the fifth and sixth seconds, it's away from the tissue again, then it is. There is no time limitation.
>
> I can perform this method for two seconds. I could perform it for two minutes. There is no time limitation.

(Tr. at 1580-81) (emphasis added). While this Court indeed held that there were no temporal limitations to the performance of the claimed method, it also held that that "the return electrode is not to contact the body ***at all during the performance of the claimed method.***" (4/9/03 Memorandum Order at 2, D.I. 353) (emphasis in original). Thus, if the energy was still on when the return electrode "hits the tissue" in the fourth second of Mr. Bobrow's example, there would be no infringement no matter what happened over the first three seconds.

Finally, ArthroCare presented no direct evidence that doctors do not touch the return electrode to tissue during use of the accused products. In fact, ArthroCare presented no evidence that the doctors who used the devices actually used them to perform the method of the asserted claims. Dr. Goldberg's only opinion, and all that the evidence showed, was that "doctors have used the Saphyre after the [patents' issue] date in the United States." (Tr. at 462; *see also* Tr. 465-66 and 470). There is not one shred of evidence that the uses described by Dr. Goldberg were actually directly infringing the methods of the '592 patent.

Dr. Goldberg ignored the Court's claim construction and presented its infringement case based on ArthroCare's long rejected argument of what the claim means. ArthroCare thus failed to present any relevant evidence by which a reasonable jury could find that the use of any of the three accused products satisfies the return electrode "not in contact" requirement. JMOL of non-infringement is proper.

F. The '882 Patent

1. There Is No Infringement Of The '882 Patent Because The Certificate Of Correction Is Not Valid

The Certificate of Correction broadened the scope of claim 1 of the '882 patent by reducing the number of electrodes required by the claim. Prior to the Certificate of Correction, claim 1 of the '882 patent required four electrodes: an electrode terminal, an active electrode, a return electrode, and an electrically conducting terminal. (JTX-2 at col. 24 lines 8-12). After the Certificate of Correction, the claim required only two electrodes: an electrode terminal and a return electrode. (*See* Certificate of Correction attached to JTX-2).

It was undisputed at trial that if the Certificate of Correction had not been obtained—or was invalid— Smith & Nephew would not infringe the '882 patent, because the accused Control RF and Saphyre products have only two electrodes. (*See* testimony of ArthroCare's expert, Dr. Goldberg, (Tr. 1110) (D.I. 415)).[9]

As set forth in Smith & Nephew's brief in support of its motion for a new trial (filed concurrently), Smith & Nephew contends that the issue of validity of the Certificate of Correction should never have been submitted to the jury. However, since it was submitted to the jury, and there was no evidence supporting the jury's finding that the Certificate of Correction was valid, JMOL should be entered for Smith & Nephew on this issue.

The controlling case on the validity of the Certificate of Correction is *Superior Fireplace v. Majestic Products*, 270 F.3d 1358, 1368 (Fed. Cir. 2001). In that case, the Federal Circuit explained that corrections are permitted under 35 U.S.C. § 255 only in order to correct "a mistake of a clerical or typographical nature, or of minor character, which was not the fault" of the PTO. As explained in *Superior Fireplace*, a mistake "of a minor character" may not broaden the claim. 270 F.3d at 1376. Since the Court has already determined here that the Certificate of Correction broadened the claim (D.I. 417 at 1550-51), and ArthroCare's expert Dr. Goldberg admitted as

[9] ArthroCare tried to create some confusion with the jury by having its expert, Dr. Goldberg, testify that the ElectroBlade product might be viewed as having more than two electrodes. (Tr. at 1111-13). However, this testimony was irrelevant and confusing, since the '882 patent had never

much (D.I. 415 at 1109-11), in order for the Certificate of Correction to be valid, the alleged "mistake" that was "corrected" must therefore qualify as one "of a clerical or typographical nature."

A Certificate of Correction can validly correct a clerical or typographical mistake only if a review of the file history reveals (1) there was indeed a "clerical or typographical mistake" and (2) it is both "manifest" that there is an error to be corrected and it is also "manifest" how to correct the error. 270 F.3d at 1370.

In Smith & Nephew's Opening Brief in Support of its Inequitable Conduct Case, Smith & Nephew showed how the Certificate of Correction at issue was actually obtained by ArthroCare's in-house attorney, John Raffle, in order to broaden the claim so that it could sue Ethicon — in other words, that there was no "mistake" involved at all. (D.I. 442 at 35). However, putting that issue aside, the prosecution history and the testimony from trial shows that no reasonable juror could have found that either the alleged mistake or the solution for correcting the alleged mistake was "manifest," for at least the following four reasons:

a. A Simultaneous Complementary Change to Claim 26 Shows That There Was No Manifest "Error" in Claim 1

Mr. Raffle filed the Request for Certificate of Correction on December 17, 1997. (DTX 306 at 234-35).[10] In the Request for Certificate of Correction, Mr. Raffle represented that the alleged "errors" being corrected arose in connection with an amendment he filed during prosecution of the '882 patent application on March 25, 1997. (DTX 306 at 200-10). One of the alleged errors involved amending application claim 23 (which became patent claim 1) so that the claim required both an "active electrode" and an "electrode terminal." However, in that very same amendment, Mr. Raffle also amended application claim 52 (which became patent claim 26) so that it also required both an "active electrode" and an "electrode terminal." Thus, Mr. Raffle

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even been asserted against the ElectroBlade product. (*See, e.g.*, ; Tr. at 1214; see also D.I. 405 at 3).

[10] Although the Request refers to claim "23," it is clear that this was a mistaken reference to the application claim number, and that the request sought to change claim 1. (DTX 306 at 239; D.I. 417 at 1510).

simultaneously amended the claims that would become claims 1 and 26 so that they both included an "active electrode," and an "electrode terminal," (as well as a "return electrode"). (*See* D.I. 417 at 1511-13):[11]

> Q. So just to review, in Claim 1, in the second — in the third line, you changed active electrode to electrode terminal; right?
>
> A. Yes.
>
> Q. And in the third line of Claim 26, you left active electrode all alone. You didn't change it; right?
>
> A. That's correct.
>
> Q. Okay. And then in the sixth line of Claim 1, you left active electrode again all alone, didn't change it; right?
>
> A. Correct.
>
> Q. And in the corresponding sixth line of Claim 26, you changed active electrode to electrode terminal; right?
>
> A. Correct.

Thus, anyone reviewing the file history of the '882 patent would see that one instance of "active electrode" was changed to "electrode terminal" in both claims 1 and 26, whereas the other instance of "active electrode" in both claims 1 and 26 was left unchanged. Accordingly, no reasonable juror could find that it was "manifest" that the term "active electrode" was in error in claim 1, or that it was "manifest" that "active electrode" should be changed to "electrode terminal" in claim 1.

b. The Amendments To Claims 1 And 26 Created Inconsistent Antecedent Basis Problems -- And There Was No Way Of Knowing Which Was Correct

ArthroCare has argued that an error in antecedent basis in claim 1 supports the notion that the so-called "mistake" was "manifest."

Generally, the first time an element is referred to in a claim, an indefinite article ("a" or "an") is used, whereas thereafter, a definite article ("the or "said") is used to show that the same

[11] A side-by-side comparison of Mr. Raffle's amendments to application claims 23 and 52 (which became patent claims 1 and 26 respectively) was used to cross-examine Mr. Raffle at trial. (Exhibit A to accompanying Declaration of William J. Marsden, Jr.

claim element is being described. To use a definite article for the first mention of a claim term is sometimes referred to as improper "antecedent basis."

In this case, as a result of the amendment Mr. Raffle made to claim 1, the term "active electrode" did not have a proper antecedent basis. (JTX-2, col. 24, lines 5-12). However, anyone reviewing the file history would see that there were other instances in the claims of the '882 patent in which there was an improper antecedent basis. For example, as a result of the amendment Mr. Raffle made to claim 26, at the very same time as his amendment to claim 1, the term "electrode terminal" also did not have a proper antecedent basis. (JTX-2, col. 25, lines 24-30). Thus, anyone reviewing the file history for the '882 patent would see that (a) Mr. Raffle amended claim 1 to include both an "active electrode" and an "electrode terminal," but did not provide proper antecedent basis for the "active electrode," and (b) at the very same time, he amended claim 26 to include both an "active electrode" and an "electrode terminal," but did not provide proper antecedent basis for the "electrode terminal."

Given this, it would not be possible for one reviewing the file history to determine (1) whether any error occurred at all, or if so (2) whether the error was in claim 1 or 26 or both, or (3) whether "electrode terminal" should be "active electrode" or "active electrode" should be "electrode terminal." Certainly, no reasonable juror could possibly find that any of this was "manifest." If anything, to the extent an antecedent basis error would be recognized at all, the most obvious way to correct the error would be to simply change "the" to "an" to correct the antecedent basis.

c. ArthroCare's Failure To Object To The Examiner's Statement Of Reasons For Allowance Shows That There Was No "Manifest Error" In Claim 1

Further, anyone reviewing the file history would see that the Examiner had relied on the alleged "mistake" in claim 1 when deciding to issue the '882 patent, and would thus not think that the alleged error was "manifest."

As is not uncommon, the Examiner provided a statement of his reasons for allowing the '882 patent to issue, which relied on the scope of application claim 23 as of June 22, 1997 — *i.e.*,

before it was broadened by Mr. Raffle's Certificate of Correction (DTX 306 at 222) (emphasis added):

> The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose or suggest a method for applying energy to a target site on a patient body structure comprising providing an ***electrode terminal*** and a ***return electrode*** electrically coupled to a high frequency voltage source; positioning the ***active electrode*** in close proximity to the target site in the presence of an ***electrically conducting terminal***; and, applying a high frequency voltage between the electrode terminal and the return electrode, the high frequency voltage being sufficient to vaporize the fluid in a thin layer over at least a portion of the electrode terminal and to induce the discharge of energy to the target site in contact with the vapor layer.

As can be seen, the Examiner's Reasons for Allowance was clearly based on the "uncorrected" scope of application claim 23 as it essentially quotes that claim (compare the Reasons for Allowance with application claim 23 as set forth in the Amendment of March 25, 1997, DTX 306 at 201).

Moreover, anyone reviewing the file history would know that such a statement of Reasons for Allowance is binding on the patentee, absent an objection by the patentee. *See Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999) (holding that failure to respond to an examiner's reason for allowance functioned as a disavowal of a different interpretation of the claim). Thus, since ArthroCare never objected to the binding statement of Reasons for Allowance, there is simply no way that anyone reviewing the file history would think that it was "manifest" that there was an error in the statement, and thus in claim 1.

d. The Alleged Errors Were Not Even "Manifest" To Mr. Raffle

As shown above, claims 1 and 26 both included an "active electrode" as well as an "electrode terminal," and they both had antecedent basis problems. Mr. Raffle carefully reviewed both claims when the '882 patent issued. (DTX 306 at 235). Yet he only sought a Certificate of Correction with respect to claim 1, and he was perfectly happy to leave claim 26 alone (Tr. 1541) (D.I. 417):

Q. On the certificate of correction, you did not ask to change Claim 26; right?

A. I believe that's correct, yes. Claim 26.

Q. As issued.

A. As issued. That's correct.

Q. You did not ask to correct that?

A. That's correct.

Thus, to Mr. Raffle himself, the inclusion of both an "active electrode" and an "electrode terminal" in a claim was not a "manifest" error, and an antecedent basis problem with respect to one of those electrodes was also not a "manifest" error. Of course, as shown in Smith & Nephew's Opening Brief in Support of its Inequitable Conduct Case, Mr. Raffle's true motive in seeking the Certificate of Correction was to broaden claim 1 of the '882 patent for ArthroCare's lawsuit against Ethicon, and had nothing at all to do with correcting any actual "errors."

In light of this clear evidence, no reasonable juror could have found either the alleged errors in claim 1 of the '882 patent to be "manifest," or the manner of correcting those alleged errors to be "manifest." Accordingly, JMOL should be entered that the Certificate of Correction is not valid, and therefore that there is no infringement of the '882 patent by the accused Smith & Nephew products.

2. Non-suction Models of Smith & Nephew's Saphyre Products do Not Infringe Claim 54 of the '882 Patent Because ArthroCare Has Failed to Prove that these Products Satisfy the Requirement of "Evacuating Fluid Generated at the Target Site with a Suction Lumen Having a Distal End Adjacent the Electrode Terminal"

Claim 54 of the '882 patent requires evacuating fluid with a suction lumen having a distal end adjacent the electrode terminal. Several of the Saphyre models accused of infringing this claim do not come with suction. Thus, it is impossible for these models to evacuate fluid and infringe claim 54. ArthroCare has admitted that these products do not infringe this claim. D.I. 417 at 1493-94, D.I. 405 at 3. Thus, JMOL of non-infringement of claim 54 is appropriate with respect to these products.

G. Smith & Nephew Is Not Liable For Contributing To The Infringement Of Any Claim Of The Patents-In-Suit

Even if ArthroCare had offered evidence of direct infringement by Smith & Nephew customers, ArthroCare has not presented sufficient evidence from which a reasonable jury could find Smith & Nephew liable for contributory infringement under 35 U.S.C. § 271(c). As part of its case-in-chief on contributory infringement, ArthroCare had to prove that Smith & Nephew's probes are not staple articles of commerce suitable for substantial non-infringing uses. *See* 35 U.S.C. § 271(c). The focus of the analysis of non-infringing uses is the thing actually sold by the accused infringer. *Hodosh v. Block Drug Co.*, 833 F.2d 1575, 1578 (Fed. Cir. 1987). Yet ArthroCare never addressed the non-infringing uses, much less presented evidence that those uses are not substantial.

Indeed, Dr. Goldberg's only testimony on the contributory infringement or the non-infringing uses for Smith & Nephew's probes is:

> Q. Now, Dr. Goldberg, the last subject I have for you today has to do with contributory infringement. Have you formed an opinion about whether Smith & Nephew is contributing to the infringement of ArthroCare's asserted claims through its sale of the Saphyre, the Control RF and the ElectroBlade?
>
> A. Yes, I have.
>
> Q. Tell us your opinion, please?
>
> A. Smith & Nephew, by the fact that they are selling this device, teaching folks how to use it in an infringing way, are certainly contributing to the infringement of these patents.
>
> Q. And can you tell us of any documents or other information on which you base your opinion?
>
> A. Well, all the documents we have just gone through, the instructions for use and the sales guides, are clearly pointing, they are teaching to, and providing product to infringe these patents. ***And an important point to add, in terms of the contributing to infringement, is that, as I have shown, the documents themselves say that they are selling these devices to be used for arthroscopic surgery, not for other things.***

(Tr. at 499-500) (emphasis added). Not only is this testimony not supported, but it is also facially misleading and prejudicial. As discussed above, the patents-in-suit are not limited to arthroscopic

devices and methods, and in fact are directed to open surgeries. ArthroCare's continual emphasis on arthroscopic products wrongly suggested to the jury that, since ArthroCare's *commercial* products are arthroscopic devices, Smith & Nephew's arthroscopic devices must infringe. This was unfair and misleading.

As described above, Dr. Goldberg's opinions that the use of Smith & Nephew's probes infringe the patents-in-suit lack sufficient factual support, ignore the Court's claim construction, and was not disclosed in Dr. Goldberg's expert report. Even if one accepts Dr. Goldberg's findings of infringement, it is readily apparent and uncontested that there are substantial non-infringing uses for the accused products that do not infringe the asserted claims of the patents-in-suit. In fact, there are numerous non-infringing uses for each of the accused products.

Examples of uses of the accused products that do not infringe the '592, '882, and '536 patent claims are using the probes to apply energy while the return electrode is in contact with tissue, using the probes to apply energy without creating a vapor layer, and using the probes as part of an electrosurgical system that does not have a fluid supply as part of a "unitary whole" electrosurgical system.

Dr. Goldberg has testified that the accused products infringe the claims of the '592 patent because in use they are ***not always*** in contact with tissue while energy is being applied. (Tr. at 421-22). In reaching this conclusion, Dr. Goldberg recognized that the return electrode of the accused devices does frequently touch tissue while power is being applied. (Tr. at 421-22) ("as the videotape and Mr. Marsden suggested, very clearly there is occasional contact frequently ..."). It is thus uncontested that using Smith & Nephew's probes to apply energy while the return electrode is in contact with tissue is a non-infringing use of these probes even under Dr. Goldberg's description of what constitutes infringement.

Absent some evidence that these the non-infringing uses of Smith & Nephew's probes (*i.e.*, use with the return electrode in contact with tissue) are not substantial non-infringing uses, no reasonable jury could conclude that Smith & Nephew is liable for contributory infringement.

H. Smith & Nephew is Not Liable for Inducement of Infringement of Any Claim of the Patents-in-Suit.

Nor has ArthroCare offered evidence sufficient to support a finding that Smith & Nephew has actively induced others to infringe any of the claims under 35 U.S.C. §271(b). To be liable for active inducement, the inducer must have "possessed the specific intent to encourage another's infringement and not merely that the defendant had knowledge of the acts alleged to constitute infringement." *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 553 (Fed. Cir. 1990). To prove inducement, ArthroCare bears the burden of proving first that Smith & Nephew's customers directly infringe, for there is no liability for inducement without a corresponding act of direct infringement. *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 774 (Fed. Cir. 1993); *Proctor & Gamble Co. v. Nabisco Brands, Inc.*, 604 F. Supp. 1485, 1487 (D. Del. 1985), *overruled on other grounds*, *National Presto Industries, Inc. v. West Bend Co.*, 76 F.3d 1185 (Fed. Cir. 1996) ("There can be no liability for inducement of infringement under section 271(b) unless an actual infringement in violation of section 271(a) is induced."). ArthroCare must also prove that Smith & Nephew induced that direct infringement. *Manville Sales*, 917 F.2d at 553. Additionally, ArthroCare must show that Smith & Nephew had actual intent to cause the acts which constitute the infringement *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468-69 (Fed. Cir. 1990).

ArthroCare offered no evidence that any customer of Smith & Nephew has ***ever*** used any one of the accused probes in a way that meets all of the limitations of any of the claims in suit. Indeed, the only evidence ArthroCare introduced about how Smith & Nephew customers use the products came from Smith & Nephew clinical evaluation surveys, which do not address most, much less all of the elements required by the claims. (D.I. 410 at 466, 471, and 484).

In addition, ArthroCare did not prove that Smith & Nephew ***intends*** to cause others to infringe any of the claims of the patents in suit. ArthroCare argued for the admissibility of otherwise inadmissible and highly prejudicial copying evidence, claiming that such evidence was relevant to show the intent to cause infringement element of its inducement charge. (Tr. at 24-

25). ArthroCare's "copying" story, which consisted only of an *ad hominem* attack and evidence that Smith & Nephew looked at certain ArthroCare products (with no evidence of actual copying), was wholly insufficient to show that Smith & Nephew actively induces any such infringement. Moreover, ArthroCare introduced no "evidence" of "copying" related to the Saphyre product.

ArthroCare also attempted to rely on evidence that Smith & Nephew instructs users to avoid contacting ***non-target*** tissue with the return electrode of the Saphyre product. (Tr. at 486). In arthroscopy, there is a well-recognized distinction between target and non-target tissue. Philip Eggers, one of the co-inventors of all three patents in suit, testified that tissue such as the meniscus is an example of target tissue and tissue such as cartilage is an example of non-target tissue. (Tr. at 351-352). Smith & Nephew does not instruct users to avoid contact with ***any*** tissue, it only instructs users to avoid contact with ***non-targeted*** tissue. Thus, ArthroCare's supposed evidence that Smith & Nephew is inducing infringement of the '592 patent claims by instructing surgeons not to contact non-targeted tissue with the Saphyre probe does not support Dr. Goldberg's conclusion, and, in fact, contradicts it.

ArthroCare's evidence is insufficient to support a finding that Smith & Nephew's customers or users actually use the accused probes in a way that directly infringes any of the claims, much less that Smith & Nephew actively induces them to do so.

I. Because The Relevant Factual Evidence Is Undisputed, This Court Should Find The Asserted Claims Of The Patents-In-Suit Invalid As A Matter Of Law

It is well recognized that a finding of invalidity requires proof by clear and convincing evidence. *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1576 (Fed. Cir. 1996). Nonetheless, where the relevant facts are undisputed—whether the references are prior art and what those references disclose—a jury may not simply ignore those facts to find the patent valid. *See Verdegaal Brothers, Inc., v. Union Oil Company Of California*, 814 F.2d 628, 632 (Fed. Cir. 1987) (granting JNOV based on the "uncontradicted disclosure" of a prior art reference); *see also IPPV Enterprises, LLC v. Echostar Communs. Corp.*, 191 F. Supp. 2d 530, 561-62 (D. Del. 2002)

(granting JMOL based on "undisputed evidence" that the patent was invalid as anticipated and finding that no reasonable jury viewing the documentary evidence . . . could fairly conclude otherwise"). If the prior art references show that all of the limitations of a patent claim are present, the trial court is ***required*** to enter JMOL of anticipation. *See id.*; *Anderson v. Liberty Lobby*, 477 U.S. 242, 250-51 (1986) ("The trial judge must direct a verdict if, under the governing law, there can be but one reasonable conclusion as to the verdict."); *Richardson-Vicks, Inc. v. Upjohn Co.*, Civ. Action No. 93-556-SLR, 1996 WL 31209 (D. Del.), *aff'd* 122 F.3d 1476 (Fed. Cir. 1997). (entering JMOL of invalidity where "the evidence, viewed in a light most favorable to plaintiff, nevertheless compels a verdict contrary to that of the jury").

1. There Are No Factual Disputes Relating To Validity

In the present case, there are ***no*** factual disputes relating to validity. First, there is no dispute that the six references relied on by Smith & Nephew are prior art. Moreover, there is no real dispute about the relevant disclosures of these references, or of the patents-in-suit.

Smith & Nephew proved by clear and convincing evidence that each of the asserted claims of the patents-in-suit is invalid. Its expert, Dr. Taylor, showed how—on a limitation-by-limitation basis—various prior art patents and articles anticipate the asserted claims of the '536 (D.I. 416 at 1294-1313), '882 (D.I. 416 at 1313-25) and '592 (D.I. 416 at 1325-34) patents. Similarly, Dr. Manwaring, one of Smith & Nephew's other experts, also showed that the '882 patent is invalid. (D.I. 414 at 883-96). ArthroCare, on the other hand, failed to put forth ***any*** evidence to rebut Smith & Nephew's *prima facie* showing of invalidity, and called no witnesses to testify on validity. Thus, ArthroCare failed to meet its burden to introduce rebuttal evidence showing that the claims are valid. *U.S. Environmental Prods. Inc. v. Westall*, 911 F.2d 713, 716 (Fed. Cir. 1990) (holding that once a defendant demonstrates a *prima facie* case of invalidity, the patent holder must come forward with convincing evidence to rebut the showing); *see also Hycor Corp. v. Schlueter Co.*, 740 F.2d 1529, 1537 (Fed. Cir. 1984).

Instead, all ArthroCare did was cross-examine Smith & Nephew's experts. But ArthroCare's cross-examination fell far short of creating a record that can support the jury's

verdict that the asserted claims are valid. Nothing brought out in the cross-examinations of Drs. Taylor and Manwaring undermined the limitation-by-limitation analysis presented by these experts. ArthroCare's counsel merely cited irrelevant concessions related to claim construction arguments that ArthroCare had proposed, and that this Court had already rejected. In light of the verdict of validity, ArthroCare's focus on irrelevant cross-examination topics clearly confused the jury, since none of these "concessions" rebutted Smith & Nephew's clear and convincing evidence of invalidity. Thus, no reasonable jury could have failed to have found the patents invalid, and the jury's verdict cannot stand. *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998).

2. The '536 Patent

Smith & Nephew proved by clear and convincing evidence that the asserted claims of the '536 patent are invalid. Specifically, Dr. Taylor provided a limitation-by-limitation analysis of how the Elsässer and Roos Article (DTX 59A and 59B; D.I. 416 at 1294-1300), the Roos '198 patent (DTX 11; D.I. 416 at 1300-05), the Doss '007 patent (DTX 17; D.I. 416 at 1305-09), and the Pao '499 patent (DTX 21; D.I. 416 at 1309-13) each anticipate the asserted claims of the '536 patent. ArthroCare provided ***no*** rebuttal evidence to contradict Dr. Taylor's testimony, and instead relied on its cross-examination of Dr. Taylor to do nothing more than confuse the jury. However, Dr. Taylor did not waver or contradict his testimony during cross-examination, and his testimony did not provide ArthroCare with the rebuttal evidence it needed to overcome Smith & Nephew's *prima facie* case of invalidity.

a. The Pao '499 Patent

Perhaps the most obvious example of how ArthroCare confused and misled the jury, and of the jury ignoring the evidence with respect to the issue of invalidity involves the Pao '499 patent (DTX 21, Exhibit hereto). In his direct testimony, Dr. Taylor showed how the Pao '499 patent disclosed every limitation—on a limitation-by-limitation basis—in claims 46 and 56 of the '536 patent, as well as the unasserted independent claim 45 (D.I. 416 at 1309-13; Exhibit B).

In its cross-examination of Dr. Taylor relating to the Pao '499 patent (D.I. 416 at 1405-12), ArthroCare only asked him about one claim limitation—"the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue." But this is a limitation that is found ***only*** in claim 47 of the '536 patent (*see* JTX-1, claim 47 at col. 18, lines 32-36), which is the one claim against which Smith & Nephew did ***not*** assert the Pao '499 patent. (D.I. 416 at 1728). Thus, ArthroCare's cross-examination of Dr. Taylor on this issue was completely irrelevant and misleading.

Since ArthroCare did not offer any rebuttal evidence and did not even cross-examine Dr. Taylor with respect to any other claim term, it was ***undisputed*** at trial that the Pao '499 patent anticipates claims 45, 46, and 56 of the '536 patent. Yet the jury found otherwise. Thus, JMOL of invalidity of these claims ***must*** be entered. *Verdegaal Bros.*, 814 F.2d at 632; *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

b. The Doss '007 Patent

In his direct testimony, Dr. Taylor also showed how the Doss '007 patent (DTX 17, Exhibit 3) disclosed every limitation—on a limitation-by-limitation basis—of claims 45, 46, and 47 of the '536 patent. (D.I. 416 at 1305-09; Exhibit C). In its cross-examination of Dr. Taylor, ArthroCare asked him about only two claim limitations: "return electrode" and "connector located at the proximal end of the shaft." *See* JTX-1, claim 45 at col. 18, lines 18-22.[12] But once again ArthroCare failed to elicit any testimony that Smith & Nephew's invalidity case.

i. Return Electrode

Dr. Taylor explained that the Doss '007 patent discloses a return electrode under the Court's claim construction. (D.I. 416 1306-07, 1455-57). ArthroCare did not introduce any contrary testimony, and Dr. Taylor did not waver in his opinion on cross-examination. Instead of seeking any relevant testimony, ArthroCare asked a series of irrelevant and misleading questions regarding possible tissue effects by the return electrode. (D.I. 416 at 1380-99).

[12] These limitations are found in independent claim 45. "Since the patentee [] does not argue the validity of the dependent claims separately, their validity will stand or fall with the independent claim [45]." *Richardson-Vicks v. Upjohn Co.*, 122 F.3d 1476, 1480 (Fed. Cir. 1997).

First, ArthroCare asked Dr. Taylor whether the term "return electrode" was explicitly used in the Doss '007 patent. (D.I. 416 at 1380). ArthroCare was apparently trying to mislead the jury by suggesting that the words "return electrode" must be explicitly disclosed or the reference does not anticipate. This is clearly wrong, as claim limitations can be inherently found in a reference. *See MEHL/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1362, 1365 (Fed. Cir. 1999); *see also Tyler Refrigeration v. Kysa Ind. Corp.*, 777 F.2d 687, 689 (Fed. Cir. 1985). Thus, ArthroCare's attempt to show that an inherent limitation is not explicitly disclosed does not rebut Smith & Nephew's anticipation case. *MEHL/Biophile Int'l Corp.*, 192 F.3d at 1366; *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 630 (Fed. Cir. 1987).

ArthroCare then set out on a path of questioning that not only ignored the Court's construction of the claim term "return electrode," but also reargued the claim construction that it had originally proposed and that the Court had rejected. ArthroCare had sought a claim construction that the return electrode would have minimal tissue effect. (Joint Claim Construction Statement) (D.I. 270 at 9). The Court squarely rejected ArthroCare's proposed claim construction, and instead held that "[a]s contrasted with an active electrode, the term 'return electrode' means 'an electrode having a larger area of contact than an active electrode, thus affording a lower current density.'" (4/19/03 Memorandum Order at 4) (D.I. 353). Yet ArthroCare ignored the Court's claim construction, and attempted to mislead the jury by asking questions related to tissue effect by the return electrode. At this point in the trial, the Court expressed some concern that the question may be misleading "because it is maybe inconsistent with what I've said." (D.I. 416 at 1389). The Court went on:

> THE COURT: Well, if you are saying there is no difference between the two, I mean I do believe that under this definition there has to be a difference between the active and the return. If you are saying and your point is that in the [Doss] prior-art reference there is no difference between the two, then that is an appropriate line of cross.

ArthroCare's counsel then assured the Court that that was his intention to show specifically that there was no difference between the two electrodes. (D.I. 416 at 1389-90). However, following this interchange, ArthroCare did not attempt to show that there is no

difference between the two, but instead went right back to asking about tissue effects (D.I. 416 at 1396):

> Q. So again, my question, sir, simply is, is each electrode designed to cause a tissue effect?
>
> A. Yes.

This line of questioning is clearly misleading as it fails to take into account the Court's claim construction, which permits the return electrode to have a tissue effect. Moreover, Dr. Taylor's answer in no way contradicts his prior testimony, nor his testimony on redirect (D.I. 416 at 1455-57) (emphasis added):

> Q. Did you use the Court's definition of return electrode in determining whether or not the Doss reference had a return electrode?
>
> A. Yes.
>
> Q. And what is the critical element of the Court's definition of whether or not something constitutes a return electrode?
>
> A. ***The critical element is an electrode having a larger area of contact than an active electrode, thus affording a lower current density.***
>
> Q. And when you reviewed the Doss patent, did you find such an electrode?
>
> A. Yes. The outer electrode is -- just look at the geometry --
>
> * * *
>
> And just on the basis of plane geometry if you assume both electrodes have the same thickness, the outer electrode will have more surface area.
>
> Q. And does that outer electrode meet the Court's definition of a return electrode?
>
> A. I believe it does.

Thus, ArthroCare failed to rebut Dr. Taylor's clear and convincing testimony that the Doss '007 patent discloses a return electrode.

ii. Connector Near the Proximal End of the Shaft

Dr. Taylor testified that that the Doss '007 patent discloses a connector near the proximal end of the shaft (D.I. 416 at 1307), pointing specifically to col. 3, lines 30-34, which provides as follows:

> Reference is made to Fig. 9 which schematically shows a two-electrode embodiment of the invention. A source of alternating voltage 12 such as a radio-frequency generator producing a 0.1 to 20 megahertz electric current is operably connected to electrodes 14 and 16.

This disclosure clearly meets this Court's interpretation of "connector" (4/9/03 Memorandum Order at 2) (D.I. 353):

> The word connect means "to bind or fasten together; join or unite; link[.]" The word "connector," in terms of the '536 patent, shall be construed to mean a "structure that electrically links the electrode terminal to the high frequency power supply."

In its definition, the Court did not require that the connector be removable. Thus, a wire that passes through the proximal end of the device as shown in Figs. 7 and 9 of the Doss '007 patent would be a "connector" under the Court's construction.

However, in its cross-examination, ArthroCare once again ignored the Court's claim construction, and asked only whether the location of the connector was explicitly disclosed (D.I. 416 at 1400):

> Q. And here in the Doss '007 patent, would you agree with me that there is no disclosure of where the connector is located, in other words, there is nothing that tells you where the connector is located with respect to the shaft?
>
> A. Hold on a second. I believe that's correct. There is no specific mention of the location of that.

As discussed above, this is both misleading and legally incorrect because elements that are inherently disclosed still anticipate. Therefore, ArthroCare did not rebut Dr. Taylor's testimony that the Doss '007 patent discloses a connector near the proximal end of the shaft. *Verdegaal Bros.*, 818 F.2d at 631; *IPPV Enterprises, LLC*, 191 F. Supp. 2d at 561-62.

Because the return electrode and connector elements were the only ones that ArthroCare even attempted to demonstrate were not in the Doss '007 patent, and because ArthroCare patently

failed in that attempt, ArthroCare did not rebut Smith & Nephew's *prima facie* case that the claims 45, 46, and 47 of the '536 patent are invalid as anticipated by the Doss '007 patent and JMOL of invalidity should be entered based on this reference. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

c. The Elsässer and Roos Article and the Roos '198 Patent

In his direct testimony, Dr. Taylor showed how both the Elsässer and Roos Article (DTX 59A and 59B) and the Roos '198 patent (DTX 11, Exhibit 5) disclosed every limitation—on a limitation-by-limitation basis—of claims 45, 46, 47, and 56 (Ross '198) and 45, 46, and 56 (Elsässer and Roos Article) of the '536 patent (D.I. 416 at 1294-1305; Exhibits D and E). In its cross-examination of Dr. Taylor relating to these references, ArthroCare asked him only about two claim limitations—"electrically conducting fluid" and "connector near the proximal end of the shaft." *See* JTX-1, claim 45 at col. 18, lines 18-25. Again, the validity of the dependent claims, which ArthroCare did not separately challenge, stands or falls with the independent claim. *Richardson-Vicks*, 122 F.3d at 1480. And again, ArthroCare failed to rebut Smith & Nephew's clear and convincing invalidity proof.

i. Connector Near the Proximal End of the Shaft

ArthroCare cross-examined Dr. Taylor with respect to the "connector" limitation in the Roos '198 patent, but not with respect to the Elsässer and Roos Article. In any event, it was undisputed at trial that the Roos '198 patent and the Elsässer and Roos Article both disclose a connector at the proximal end of the shaft (DTX 11 at col. 7, lines 1-7) (emphasis added):

> In the present embodiment, two leads 16 pass outwards from the cylindrical neutral electrode 11, which at 20 are combined to form a single cable, ***leading to the rear end of the endoscope*** 13. The neutral electrode 11 is connected via a further insulated cable 14 to the high frequency generator...

Figure 7 and claim 1 further disclose a connector (DTX 11 at col. 7, lines 51):

> Insulated cable means for connecting said treatment electrode to one pole of a high-frequency generator...

Similarly, Figure 9 of the Elsässer and Roos Article clearly shows a removable connector near the proximal end of the endoscope. (DTX 59A at 133, Fig. 9) (Marsden Dec. Ex. 6)

It is clear that these disclosures in the Roos '198 patent and the Elsässer and Roos Article satisfy the limitation "connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply," as construed by the Court. First the Court held that the term "connector" simply means "a structure that electrically links the electrode terminal to the high frequency power supply." (4/9/03 Memorandum Order at 2) (D.I. 353). In its definition, the Court did not require that the connector be removable. Thus, a wire that passes through the proximal end of the device would be a connector under the Court's construction. The Roos '198 patent at Figure 7 and col. 7, lines 1-7 and the Elsässer and Roos Article at Figure 8 both show that all the wires lead to the rear (proximal end) of the endoscope. Thus, both references disclose a connector that is located at the proximal end of the shaft.

Second, Dr. Taylor testified that the Roos '198 patent and the Elsässer and Roos Article each disclose a connector near the proximal end of the shaft. (D.I. 416 at 1298 and 1302-03, respectively; *see also* Exhibits D and E). For example, Dr. Taylor explained how the Roos '198 patent discloses a connector at the proximal end of the shaft (D.I. 416 1301-03) (emphasis added):

> Q. Have you done an element-by-element comparison of the teachings of the Roos '198 with the claims of the '536 patent?
>
> A. Yes, I have.
>
> * * *
>
> A. ... A connector, requires a connector, coupling the shaft to the electrosurgical power supply. And that element is satisfied by Figure 7 and the text in Column 7, Lines 1 through 5. And also in Claim 1, as described here in this text. So that element is satisfied.

Dr. Taylor also explained that the disclosure of the connector in the Roos '198 patent was inherent (D.I. 416 at 1371-72):

> A. You do realize that all resectoscopes have connectors at the back end of the resectoscope.
>
> * * *
>
> A. There is nothing in the '198 patent that says it explicitly. But there are no resectoscopes on the market that don't have a connector at the end, on the back of the resectoscope.

ArthroCare again did not introduce any contrary testimony and Dr. Taylor never wavered in his opinion. Instead, ArthroCare only asked whether the location of the connector was ***explicitly*** described in the Roos '198 patent (D.I. 416 1371). These questions were irrelevant since elements do not have to be explicitly recited to be found in a prior art reference. *See MEHL/Biophile*, 192 F.3d at 1365; *Tyler Refrigeration*, 777 F.2d at 687.

Further, ArthroCare did not present ***any*** evidence, not even through cross-examination, to contradict Dr. Taylor's testimony that the Elsässer and Roos Article discloses a connector at the proximal end of the shaft. And ArthroCare did not ask a single question about the connector's location in the Elsässer and Roos Article.

ii. Electrically Conducting Fluid

The other issue on which ArthroCare cross-examined Dr. Taylor related to the "electrically conducting fluid" limitation. Despite ArthroCare's lengthy cross-examination of Dr. Taylor, it was ***undisputed*** at trial that claim 1 of the Roos '198 patent and the Elsässer and Roos Article both explicitly disclose electrically conducting fluid. Claim 1 of the Roos '198 patent reads:

> [A] space being formed between said treatment electrode and said neutral electrode which is adapted to be filled with ***liquid to provide electrical conductance*** between said electrodes.

(DTX 11 at col. 7, lines 59-62) (emphasis added). Similarly, the Elsässer and Roos Article also explicitly discloses electrically conducting fluid:

> [The device] offer[s] the high-frequency current a path to balance the potential difference that would be so short and ***offer such a low resistance*** that aberrant currents or leakage currents do not even occur... The ***current flows directly from the cutting loop to the neutral electrode through*** the adjacent tissue to be cut ***and the irrigation liquid.***

(DTX 59B at 4) (emphasis added).

It is clear that the "liquid to provide electrical conductance" in claim 1 of the Roos '198 patent and the "irrigation liquid" which "offer[s] such a low resistance" in the Elsässer and Roos Article are both the same as "electrically conductive fluid" as used in the '536 patent, for at least two reasons.

First, the words used in claim 1 of the Roos '198 patent and in the Elsässer and Roos Article both clearly meet this Court's interpretation of "electrically conductive fluid" (4/9/03 Memorandum Order at 3) (D.I. 353):

> "[E]lectrically conducting fluid" and "electrically conductive fluid" shall be construed to mean "any fluid that facilitates the passage of electrical current."

In its definition, all the Court required was that the fluid "facilitate[] the passage of electrical current." Of course, a "liquid" is a type of "fluid," and since "facilitate" means simply "to make easier," a "liquid to provide electrical conductance" in claim 1 of the Roos '198 patent squarely meets this Court's definition of "any fluid that facilitates the passage of electrical current." Similarly, the "irrigation liquid" that "offer[s] such a low resistance" would clearly "facilitate the passage of electrical current."

Second, the testimony at trial was ***undisputed*** that the Roos '198 patent and the Elsässer and Roos Article both disclose the use of electrically conducting fluid. Dr. Taylor testified that the Roos '198 patent and the Elsässer and Roos Article each disclose electrically conducting fluid. (D.I. 416 at 1299 and 1303, respectively). For example, Dr. Taylor explained that claim 1 of the Roos '198 patent explicitly discloses electrically conducting fluid (D.I. 416 at 1301-03) (emphasis added):

> A. ... The Roos '198 patent basically follows up on the work that Doctors Elsässer and Roos did in their article and it's a bipolar electrosurgical device for the treatment of prostate and bladder tissue, commonly known as TURP.
>
> * * *
>
> ***It also requires an electrically conducting fluid supply, directed to the target site and generating current, flow path between the active and return electrode. That is diagrammatically shown here in Figures 7 and 8 and also specifically called out in Claim 1, basically the last line in Claim 1. So that element is satisfied.***
>
> Q. Just to pause on this one for a moment, that language that is quoted below the [demonstrative exhibit] drawing comes from Claim 1 of the Roos '198 patent?
>
> A. That's correct.
>
> Q. That is where you found support for the electrically conduct[ing] fluid limitation?

A. Yes.

ArthroCare did not introduce any contrary testimony, and did not call its own expert Dr. Goldberg to testify in rebuttal to Smith & Nephew's invalidity case. Dr. Taylor never changed his opinion. Instead, ArthroCare's strategy was to once again mislead the jury by having Dr. Taylor "admit" irrelevant facts that in no way contradicted or overcame the fact that these references disclose electrically conducting fluid.

For example, Dr. Taylor testified under cross-examination that the Roos '198 patent and the Elsässer and Roos Article do not use the words "saline" or "ringer's lactate." (D.I. 416 at 1375). However, this line of questioning was misleading since the asserted claims of the '536 patent do not require that the electrically conducting fluid be saline or ringer's lactate.[13] Thus, ArthroCare failed to rebut Dr. Taylor's clear and convincing testimony that these references disclose an electrically conducting fluid under the Court's claim construction.

ArthroCare also questioned Dr. Taylor about how some other prior art monopolar TURP devices used glycine or other non-conductive fluids (D.I. 416 at 1339), apparently trying to suggest some connection between TURP procedures and non-conductive fluids.[14] However, such a suggestion does not change the unchallenged fact that claim 1 of the Roos '198 patent explicitly discloses using electrically conducting fluid as Dr. Taylor testified.

ArthroCare also attempted to confuse the jury by pointing to embodiments in the Roos '198 patent that used contact between the return electrode and the tissue to provide some of the electrical connection. (D.I. 416 at 1345). However, Dr. Taylor pointed out that "this is not the embodiment that I talked about and it's not an embodiment that I described." (*Id.*). ArthroCare's focus on other embodiments is misleading. It is well-settled that all that is needed to anticipate is one anticipating embodiment or disclosure, even if other embodiments might not anticipate. *See*

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[13] The saline limitation is found only in asserted claims 11 and 32 of the '592 patent. The references Smith & Nephew relied upon for anticipation of the '592 patent, the Doss '007 patent and the Slager article, explicitly disclose saline.

[14] The Roos '198 patent and Elsässer and Roos Article both describe devices that can be used in procedures other than TURP (DTX-11 at Col. 1, lines 18-22; DTX-59B at 5).

Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc., 127 F.3d 1065, 1068 (Fed. Cir. 1997) (holding that the district court erred in limiting the disclosure to the non-anticipating preferred embodiment when the other embodiments may anticipate). Therefore, this line of questions also did not rebut Dr. Taylor's direct testimony.

Finally, ArthroCare pointed to a later-issued patent, the Roos '667 patent. (PX-605) (Tr. at 1359-70). However, Dr. Taylor testified that the Roos '667 patent was irrelevant to his opinion that electrically conductive fluid was used in the Roos '198 patent (D.I. 416 at 1365-66) and ArthroCare adduced no evidence to the contrary.

None of Dr. Taylor's cross-examination testimony in any way contradicted his direct testimony, or the explicit disclosures of the references, that both the Roos '198 patent and the Elsässer and Roos Article clearly disclose an electrically conducting fluid. Thus, because ArthroCare put on no other evidence on this point, ArthroCare has not rebutted Smith & Nephew's *prima facie* case that the asserted claims of the '536 patent are invalid as anticipated by the Elsässer and Roos Article and the Roos '198 patent, and JMOL of invalidity of claims 46, 47, and 56 based on these references is clearly warranted. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

3. The '882 Patent

Smith & Nephew also proved by clear and convincing evidence that the asserted claims of the '882 patent are invalid. Specifically, Dr. Taylor provided a limitation-by-limitation analysis of how the Manwaring '138 patent (DTX 46; D.I. 416 at 1313-17) anticipates claims 1, 13, and 54 and the Slager Article (DTX 65; D.I. 416 at 1317-20) anticipates claims 1, 13, 17, and 54 of the '882 patent. Dr. Manwaring, one of Smith & Nephew's other experts, also testified that the Manwaring '138 patent anticipated claims 1, 13, and 54 of the '882 patent. (D.I. 416 at 886-96). Dr. Taylor further testified that the asserted claims are invalid as not enabled under 35 U.S.C. § 112, because the supposed new process of "coblation" is not adequately described to differentiate it from the prior art. (D.I. 416 at 1320-25).

ArthroCare once again provided no rebuttal evidence to contradict Dr. Taylor's and Dr. Manwaring's testimony, and instead relied on its cross-examination of these experts to confuse and mislead the jury. However, neither Dr. Taylor nor Dr. Manwaring wavered or contradicted their testimony during cross-examination, and their testimony went unrebutted.

a. The Slager Article

In its cross-examination of Dr. Taylor relating to the Slager Article (DTX 65), ArthroCare asked about two claim limitations—"at least a portion of the energy induced is in the form of photons having a wavelength in the ultraviolet spectrum" and "evacuating fluid generated at the target site"; as well as a portion of the preamble to claim 1 of the '882 patent—"applying energy to a target site on a patient body structure." However, ArthroCare failed to rebut Smith & Nephew's *prima facie* case of invalidity of the '882 patent.

i. UV Photons

Dr. Taylor testified that the Slager Article discloses energy in the form of photons having a wavelength in the ultraviolet spectrum (UV photons), which is a limitation in claim 13. (D.I. 416 at 1319; Exhibit F). ArthroCare did not introduce any contrary testimony. Instead, ArthroCare attempted to mislead the jury by suggesting that, because UV photons were not explicitly disclosed, UV photons were not present at all. (D.I. 416 at 1419-21).

However, Dr. Taylor explained, in detail, why the production of UV photons is inherently disclosed in the Slager Article based on principles of elementary chemistry:

> Q. So just from seeing a spark, just from seeing that flash of light with the naked eye, you can't tell whether or not there is ultraviolet light in there or whether there isn't. True?
>
> A. ***That's true, except you can't have a spark in aqueous solution without the UV light.***
>
> * * *
>
> Q. So you didn't do any tests and you didn't look at the literature; correct?
>
> A. ***Right. One has to realize, though, that if you have a spark in an aqueous solution, especially a sodium chloride aqueous solution, that you will generate UV photons because of the transition of the hydroxyl ion. You will***

also generate what we would consider to be orange, yellowish-orange light, 580 nanometers, because of the sodium ion transition. That is college chemistry.

(D.I. 416 at 1419-20) (emphasis added).

Dr. Taylor's testimony that the Slager Article inherently discloses the production of UV photons was not rebutted by ArthroCare, and therefore, for purposes of anticipation analysis, it does contain that limitation. *See generally Verdegaal Brothers*, 814 F.2d at 631 (holding that a patent claim is anticipated by a reference that either explicitly or inherently discloses all of the claim limitations).

ii. Evacuating Fluid Generated at the Target Site

Dr. Taylor also testified that the Slager Article discloses evacuating fluid (bubbles) generated at the target site, which is a limitation in claim 54. (D.I. 416 at 1320; Exhibit F). ArthroCare did not introduce any contrary testimony and Dr. Taylor never wavered on cross-examination. Instead, ArthroCare again attempted to mislead the jury by suggesting that, because the exact suction technique was not explicitly disclosed, that a suction lumen adjacent the electrode terminal is not disclosed. (D.I. 416 at 1425-26).

iii. Applying Energy to a Patient Body Structure

Dr. Taylor testified that the Slager Article anticipates claim 1 of the '882 patent. (Tr. at 1319; Exhibit F). Again, ArthroCare did not introduce any contrary testimony and instead attempted to mislead the jury by suggesting that, because the tissue used by Slager was a piece of aorta in a lab dish, the Slager Article did not disclose a "method for applying energy to a target site on a patient body structure" as set forth in the preamble of the '882 patent. (Tr. at 1426-28).

The reference to "patient body structure" merely sets forth the intended environment of use in the preamble of the claim, and does not constitute a claim limitation. *See Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346-47 (Fed. Cir. 2002); *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1373-75 (Fed. Cir. 2001).

Moreover, ArthroCare's suggestion is completely undercut by the position it took with respect to conception and reduction to practice of claim 1 of the '882 patent. In particular, in

order to avoid some of Smith & Nephew's prior art, ArthroCare asserted that claim 1 of the '882 patent was reduced to practice by June 18, 1993. (DTX 406). However, Philip Eggers, one of the inventors of the patents-in-suit, testified that as of 1993 his experiments had not progressed to being used in live patients, but only involved chicken parts in bowls of saline (D.I. 410 at 295):

> Q. My question to you, Mr. Eggers, is: As of January 25, 1993, or February 8, 1993, the development of your invention had not progressed to the point that it was being used on actual patients; right?
>
> A. That's correct.
>
> Q. It was only being used in experiments in bowls of saline on various chicken parts; right?
>
> A. Correct.

Thus, the inventor himself believed that experiments in bowls of saline were covered by methods of applying energy to a target site on a body structure.[15] ArthroCare cannot have it both ways. If experiments on chicken parts in bowls of saline were sufficient to constitute reduction to practice of a "method for applying energy to a target site on a patient body structure," then a prior art method involving human aorta tissue in a lab dish certainly must also qualify as such a method. Accordingly, ArthroCare did not rebut Dr. Taylor's testimony, nor did it contradict his conclusion that the Slager Article anticipates the asserted claims of the '882 patent.

Therefore, ArthroCare failed to rebut Smith & Nephew's *prima facie* case of invalidity based on the Slager Article, and JMOL of invalidity of claims 13, 17, and 54 based on this reference is warranted. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

b. The Manwaring '138 Patent

In its cross-examination of Dr. Taylor relating to the Manwaring '138 patent (DTX 46), ArthroCare asked him about two claim limitations—"at least a portion of the energy induced is in the form of photons having a wavelength in the ultraviolet spectrum" and "evacuating fluid generated at the target site." ArthroCare also asked about these same two limitations in its cross-

[15] Claim 1 of the '882 patent was reduced to practice in June 1993, and there is no evidence that the invention progressed to use in live patients in that time. Further, the language in the '592

examination of Dr. Manwaring. However, ArthroCare failed to rebut Smith & Nephew's invalidity case in either cross-examination, and did not introduce any rebuttal evidence of its own.

i. UV Photons

Dr. Taylor testified that the Manwaring '138 patent discloses UV photons. (D.I. 416 at 1316; Exhibits G and H). ArthroCare did not introduce any contrary testimony. Instead, ArthroCare attempted to mislead the jury by suggesting that, because Dr. Taylor did not test for UV photons, UV photons were not present at all. (D.I. 416 at 1429). However, as discussed above, Dr. Taylor explained why UV photons are inherently present when you have sparking in an aqueous solution, such as the sparking found in the Manwaring '138 patent, as a matter of elementary chemistry. (*See* D.I. 416 at 1316 and DTX 46 at col. 6, lines 50-63).

Dr. Taylor's opinion was corroborated by Dr. Manwaring. (D.I. 414 at 893-95 and 917-19). ArthroCare did not introduce any contrary testimony and Dr. Manwaring also never wavered on cross-examination. Instead, ArthroCare attempted to mislead the jury by suggesting that, because UV photons were not explicitly disclosed, UV photons were not present at all. (D.I. 414 at 897-98). But making such a suggestion does not satisfy ArthroCare's obligation to introduce evidence relating to validity. *Verdegaal Bros.*, 814 F.2d at 631; *IPPV Enterprises, LLC*, 191 F. Supp. 2d at 561-62.

Thus, ArthroCare failed to rebut the testimony of either Dr. Taylor or Dr. Manwaring regarding the inherent presence of UV photons.

ii. Evacuating Fluid Generated at the Target Site

Dr. Taylor testified that the Manwaring '138 patent discloses evacuating fluid generated at the target site. (D.I. 416 at 1316-17; Exhibits G and H). ArthroCare did not introduce any contrary testimony. Instead, ArthroCare attempted to obfuscate the issues and mislead the jury by suggesting an improper limitations to this claim.

---

patent, which was reduced to practice in February 1993, includes almost identical language: "method for applying energy to a target site on a body structure on or within a patient's body."

First, ArthroCare attempted to mislead the jury by suggesting that ***all*** of the fluid at the target site must be evacuated (D.I. 416 at 1432-33) (emphasis added):

> Q. Right. But you are not going to take the fluid from this region at the tip and suck ***all of the fluid way over here, way up into the device and leave no fluid down at the tip***, are you? You're going to suck fluid in, so that electrode tip has some fluid in contact with it; right?
>
> A. Oh, yes.

ArthroCare asked similarly misleading questions of Dr. Manwaring during his cross-examination (D.I. 414 at 904-05):

> Q. So isn't it fair to say, then, that [sic] fluid remains at or on the target site, that you are trying to treat in the course of a surgery?
>
> A. That's correct.

This was clearly misleading because there is no requirement that ***all of the fluid*** be evacuated. (*See* JTX-2 at claim 54 and col. 23, lines 24-33). ArthroCare's misleading suggestion does not overcome Dr. Taylor's and Dr. Manwaring's testimony that the Manwaring '138 patent discloses evacuation.

Second, ArthroCare tried to suggest that what is evacuated is not fluid generated at the target site, but rather the electrically conducing fluid (D.I. 414 at 903-04). This suggestion is irrelevant and misleading because, as Dr. Manwaring explained, the lumen would evacuate a mixture including saline as well as fluid that was generated at the target site (D.I. 414 at 921-21):

> Q. Would there be some fluid that was removed from the target site?
>
> A. Yes. Fluid would always be there, and the evacuation, whether it is sucking, essentially pulls fluid which is salt laden, electrically conductive, by the electrode. That's the principle.
>
> Q. Do you consider that evacuation?
>
> A. Yes.
>
> Q. Now, the fluid that is evacuated, would that include fluid that was generated at the target site?
>
> A. It can.
>
> Q. What kind of fluid would that include?

A. Well, heating in the presence of biologic tissue. Let's say one is ablating, which means removing, tumor tissue in the brain. That tissue is vaporized. And in that vaporization is fluid in the form of gas, which quickly mingles with the spinal fluid or the irrigated normal saline. So it's a mix again.

This is consistent with the explicit disclosure of the '882 patent. (JTX-2 at col. 23, lines 30-34). Thus, ArthroCare failed to rebut the testimony of either Dr. Taylor or Dr. Manwaring regarding the evacuation of fluid generated at the target site.

Therefore, ArthroCare failed to rebut Smith & Nephew's *prima facie* case of invalidity of the asserted claims based on the Manwaring '138 patent and the Court should enter JMOL that claims 13 17, and 54 are anticipated. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

c. Enablement

Dr. Taylor also testified that the '882 patent is invalid for lack of enablement. (D.I. 416 at 1320-25). The test for whether patent claims are enabled is whether the specification teaches those of ordinary skill in the art how to make and use the full scope of the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 736-37 (Fed. Cir. 1988).

The specification explains that the process of the '882 results in phenomenon the inventors called "cold ablation," which "can be precisely controlled to only affect a thin layer of cells without heating or otherwise damaging surrounding or underlying cells." '882 patent at 11:38-41.

The specification itself essentially establishes the enablement problem :

> The necessary conditions for forming a vapor layer near the active electrode tip(s), ionizing the atom or atoms within the vapor layer and inducing the discharge of energy from plasma within the vapor layer will depend on a variety of factors, such as: the number of electrode terminals; electrode size and spacing; electrode surface area; asperities and sharp edges on the electrode surfaces; electrode materials; applied voltage and power; current limiting means, such as inductors; electrical conductivity of the fluid in contact with the electrodes; density of the fluid; and other factors.

Id. at 11:4-13. The specification further explains that the ionizaton induces the discharge of energetic electrons only "under optimal conditions." *Id.* at 10:65-66.

Despite this requirement of "optimal" conditions, the specification fails to specify what particular parameters should be used. Instead, the specification gives large ranges of parameters for nine different variables, with no guidance as to what particular combinations would result in the "optimal conditions" required for cold ablation.

Despite using this term in the patent, the evidence showed that ArthroCare itself recognized that the method of operation of its invention is not new at all, but identical to the prior art. ArthroCare has frequently backed off of this "cold ablation" assertion. Specifically, as Dr. Taylor explained, the principle of operation of the System 970, which ArthroCare asserts is covered by the patents-in-suit Tr. 1505 is the same as how prior art devices work (D.I. 416 at 1323) (emphasis added):

> Q. Do you have any opinion as to whether ArthroCare's description of the mode of operation or the principle of operation of its System 970 is consistent with the opinion that you have offered here in court in this morning?
>
> A. Yes. Essentially, the opinion that I have, I think what is confirmed here in the text, is that ***the system operates in the same manner as a conventional electrosurgical system, use of arcing and such, that is described by what is known as prior art,*** stuff that has been known for a long time.

With this understanding, and admission that the allegedly patented devices operate like prior art electrosurgical devices, Dr. Taylor, who was clearly qualified as one of skill in the art **[cite]**, testified that if ArthroCare tried to distinguish its patents over the prior art based on its alleged "Coblation" phenomenon, the claims would not be enabled (D.I. 416 at 1324-25):

> Q. Do you have an opinion as to whether the claims of the '882 patent are enabled to the extent it claims a new phenomenon?
>
> A. Yes, I have an opinion.
>
> Q. What is that opinion?
>
> A. That it is not.

On cross-examination, Dr. Taylor did not contradict this testimony. ArthroCare's counsel merely cross-examined him on a laundry list of preferred embodiment parameters that were included in the '882 patent. (D.I. 416 at 1436-38). However, this did not rebut Dr. Taylor's testimony in any way. None of these preferred embodiment parameters discloses how one skilled

in the art duplicating the device would get a device that produces "Coblation" instead of the prior art arcing described in ArthroCare's principle of operation.

Further, if one were to build a device within the preferred embodiment parameters of the '882 patent, the result would simply be the device of the prior art Manwaring '138 patent. Here is a comparison of the most preferred embodiment of the '882 patent to the disclosure in the Manwaring '138 patent:

Preferred element	'882 Patent	The Manwaring '138 Patent
Active electrode surface area	1 to 20 mm^2 (15:37-39)	1.4 mm^2 (5:20-27)
Active electrode spaced from tissue	0.05 to 0.5 mm (15:63-66)	0 to 2 mm (5:55-61 and 6:53-57)
Active electrode may be flush with probe surface	(16:55-56)	(5:55-61)
Active electrode may be recessed from surface	0.01 to 0.2 mm (16:57-60)	0 to 2 mm (5:55-61)
Active electrode may be several materials	platinum, titanium tantalum or tungsten (16:64-66)	stainless steel or tungsten (5:20-21)
Fluid is preferably saline	(12:38-40)	(7:6-8)

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of invalidity based on non-enablement, and the Court should enter JMOL. *See generally, Enzo Biochem., Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1374 (Fed. Cir. 1999) (finding that "[t]ossing out the mere germ of an idea dos not constitute enabling disclosure" and that "reasonable detail must be provided in order to enable members of the public to understand and carry out the invention").

4. The '592 Patent

Smith & Nephew also proved by clear and convincing evidence that the asserted claims of the '592 patent are invalid. Specifically, Dr. Taylor provided a limitation-by-limitation analysis of how the Doss '007 patent (DTX 17; D.I. 416 at 1325-30; Exhibit I) and Slager Article (DTX 65; D.I. 416 at 1330-34; Exhibit J) each anticipate the asserted claims of the '592 patent. ArthroCare again provided no rebuttal evidence to contradict Dr. Taylor's testimony, and instead

relied on its cross-examination of Dr. Taylor to confuse and mislead the jury. However, Dr. Taylor did not withdraw or contradict his testimony during cross-examination.

a. Doss '007

In its cross-examination of Dr. Taylor relating to the Doss '007 patent (DTX 17), ArthroCare asked about only two claim limitations—"return electrode" and "voltage [] in the range from 500 to 1400 volts peak to peak." *See, e.g.*, JTX-3, claims 1 and 21. But once again ArthroCare failed to elicit any testimony to rebut Smith & Nephew's invalidity case.

i. Return Electrode

The '592 patent contains the same "return electrode" limitation as the '536 patent, discussed above at Section 2(b)(i). And as with the '536 patent, ArthroCare did not rebut Dr. Taylor's testimony that the Doss '007 patent discloses a return electrode. Further, this limitation is found in independent claim 1. Since ArthroCare did not argue the validity of claims 3, 4, or 11 separately, their validity will stand or fall with independent claim 1. *Richardson-Vicks*, 122 F.3d at 1480.

ii. Voltage in the Range From 500 to 1400 Volts

Dr. Taylor testified that the Doss '007 patent inherently discloses a voltage in the range from 500 volts to 1400 volts peak to peak. (D.I. 416 at 1330). ArthroCare put on no evidence to rebut this testimony. Instead, ArthroCare once again limited its cross-examination to simply showing that the limitation was not expressly disclosed, ignoring the settled law that a limitation can be present in anticipating prior art inherently. *MEHL/Biophile*, 192 F.2d at 1365.

As explained by Dr. Taylor, instead of disclosing the peak to peak voltage, the Doss '007 patent discloses a voltage of 20 to 200 volts RMS (root-mean-square). To convert from voltage expressed in RMS, one needs to multiply by 2.83 to get voltage expressed in peak-to-peak units. (D.I. 416 at 1330). This conversion results in a voltage of 560 volts peak-to-peak for the Doss '007 patent. (*Id.*). ArthroCare attempted to confuse the jury regarding this inherent disclosure by

asking Dr. Taylor whether the Doss '007 patent expressly disclosed a sine wave, which is the most common waveform used. (D.I. 416 at 1402). Dr. Taylor maintained his opinion (*id.*):

> Q. And there is nothing in the Doss patent that says that a sine wave is used with this generator; correct?
>
> A. That's correct.
>
> Q. So we don't know whether there is a sine wave here or a square wave or some other waveform; right?
>
> A. You're correct. But, to my knowledge, there are no commercially-available square wave generators.

Thus, ArthroCare failed to rebut Dr. Taylor's testimony that the Doss '007 patent inherently discloses a voltage of from 500 to 1400 volts peak-to-peak.

Therefore, ArthroCare has not rebutted Smith & Nephew's *prima facie* case that the asserted claims of the '536 patent are invalid as anticipated by the Doss '007 patent, and JMOL based on this reference is clearly warranted. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

b. Slager Article

In its cross-examination of Dr. Taylor relating to the Slager Article (DTX 65), ArthroCare asked only about one claim limitation—"spacing a return electrode away from the body structure in the presence of the electrically conductive fluid"; and the preamble language—"applying electrical energy to a target site on a body structure on or within a patient's body." *See* JTX-3 at claim 23. ArthroCare again failed to elicit testimony sufficient to rebut Smith & Nephew's invalidity case. Further, this limitation is found in independent claim 23. Since ArthroCare did not argue the validity of claims 26, 27, 32, or 42 separately, their validity will stand or fall with independent claim 1. *Richardson-Vicks*, 122 F.3d at 1480

i. Applying Energy to a Target Site on a Body Structure on or Within a Patient's Body

The '592 patent contains the same "on or within a patient's body" limitation as the '882 patent. And as discussed above with respect to the '882 patent in Section F(3)(a)(iii), ArthroCare

did not rebut Dr. Taylor's testimony that the Slager Article discloses a method for applying energy to a target site on a body structure on or within a patient's body.

ii. Spacing a Return Electrode Away from the Body Structure in the Presence of the Electrically Conductive Fluid

The Slager Article expressly discloses that a section of aortic tissue approximately 4 by 7 centimeters in size was used in an in vitro experiment. (DTX 65 at 1382.) The article also discloses that the spacing between the active electrode and return electrode varied between 2 to 10 centimeters. (*Id.* at 1383.) Thus, when the distance between the electrodes was 7 centimeters or more, the return electrode was necessarily not touching the aortic tissue sample. Dr. Taylor testified that the Slager Article discloses spacing a return electrode away from the body structure in the presence of the electrically conductive fluid. (D.I. 416 at 1331). ArthroCare did not introduce any testimony to the contrary. Instead, ArthroCare asked Dr. Taylor a series of misleading cross-examination questions regarding an experiment described in the Slager Article on which Dr. Taylor was ***not*** basing his testimony.

Specifically, the Slager Article describes both an *in vitro* and an *in vivo* experiment. (*See* DTX 65). These are two different experiments. Dr. Taylor based his opinion of invalidity on the *in vitro* experiment. His testimony on this point could not have been clearer. (D.I. 416 at 1414):

> Q. And the portions of this article that you were saying were relevant to the '882 and the '592 patent related to the *in vitro* test; correct? Not to the test on the pig?
>
> A. You said the *in vitro* test?
>
> Q. I did.
>
> A. Yes.
>
> Q. Okay. The *in vitro* means what in this article?
>
> A. *In vitro* means it's outside the body, generally in a dish preparation of some sort. I guess it's the opposite of *in vivo*, which is inside the body.

ArthroCare's counsel nevertheless went on to ask misleading questions about the irrelevant *in vivo* experiment, which did not form any part of the basis for Dr. Taylor's testimony (D.I. 416 at 1416-18). The jury may have been misled to believe that because the *in vivo*

experiment did not disclose all of the limitations, the same is true for the *in vitro* test. While the jury may have been misled, this cross examination did not rebut Dr. Taylor's clear testimony that the ***in vitro*** test in the Slager Article discloses a return electrode spaced away from the body structure in the presence of the electrically conductive fluid, nor does it rebut the explicit disclosure of the Slager Article. *See Ultradent Prods.*, 127 F.3d at 1068 (a reference anticipates if any one embodiment anticipates, even if other embodiments do not).

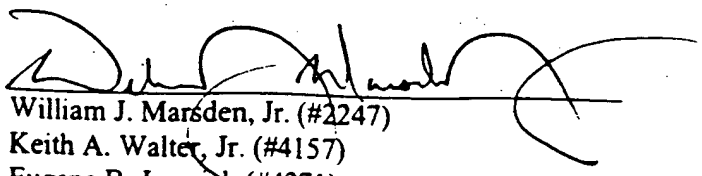
Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case that the asserted claims of the '592 patent are invalid as anticipated by the Slager Article, and JMOL is warranted based on this reference. *U.S. Environmental Prods.*, 911 F.2d at 716; *Hycor*, 740 F.2d at 1537.

V. CONCLUSION

For the foregoing reasons, Smith & Nephew respectfully requests that the Court enter Judgment as a Matter of Law that the '882 certificate of correction is invalid, that the accused products do not infringe the asserted claims, that the asserted claims of the '536 and '592 patent are anticipated by the prior art, and that the asserted claims of the '882 patent are not enabled and are anticipated by the prior art.

Dated: June 30, 2003

FISH & RICHARDSON P.C.

By: 

William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
Eugene B. Joswick (#4271)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070
Facsimile: (302) 652-0607

Mark J. Hebert
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

Kurtis D. MacFerrin
500 Arguello Street, Suite 500
Redwood City, California 94063
Telephone: (650) 839-5070
Facsimile: (650) 839-5071

Attorneys for Defendant
SMITH & NEPHEW, INC.

CERTIFICATE OF SERVICE

I hereby certify that on this 30TH day of June, 2003, a true and correct copy of SMITH & NEPHEW'S OPENING BRIEF IN SUPPORT OF ITS RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW was caused to be served on the attorneys of record at the following addresses as indicated:

BY HAND DELIVERY
Jack B. Blumenfeld, Esq.
Morris, Nichols, Arsht & Tunnell
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899-1347

Attorney for Plaintiff
ArthroCare Corporation

BY FEDERAL EXPRESS
Matthew D. Powers, Esq.
Jared Bobrow
Perry Clark, Esquire
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Attorneys for Plaintiffs
ArthroCare

BY HAND DELIVERY
Steven J. Balick, Esq.
Ashby & Geddes
222 Delaware Avenue, 17th Floor
P. O. Box 1150
Wilmington, DE 19899

Attorney for Plaintiff/Counterclaim
Defendant
Ethicon, Inc.

William J. Marsden, Jr.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 01-504 (SLR)
	)	
SMITH & NEPHEW, INC.,	)	
	)	
Defendant.	)	

ARTHROCARE'S ANSWERING BRIEF IN OPPOSITION TO SMITH & NEPHEW'S RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW

MORRIS, NICHOLS, ARSHT & TUNNELL
Jack B. Blumenfeld (#1014)
Karen Jacobs Louden (#2881)
James W. Parrett, Jr. (#4292)
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899
(302) 658-9200
Attorneys for Plaintiff ArthroCare Corporation

OF COUNSEL:

Matthew D. Powers
Jared Bobrow
Perry Clark
WEIL, GOTSHAL & MANGES LLP
Silicon Valley Office
201 Redwood Shores Parkway
Redwood Shores, CA 94065-1175
(650) 802-3000

Timothy E. DeMasi
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153
(212) 310-8000

July 30, 2003

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NATURE AND STAGE OF THE PROCEEDING

Two years ago, on July 25, 2001, ArthroCare Corporation ("ArthroCare") filed this action alleging infringement of United States Patent Nos. 5,697,536 ("the '536 patent"), 5,697,882 ("the '882 patent"), and 6,224,592 B1 ("the '592 patent"). Defendant Smith & Nephew, Inc. ("Smith & Nephew") asserted defenses of non-infringement and invalidity as to all three patents.

Trial commenced on April 30, 2003. Although Smith & Nephew referred to Rule 50 motions several times during the course of the trial, it never made a Rule 50(a) motion on the issue of invalidity. On May 7, 2003, counsel for Smith & Nephew said that "to the extent that was the close of plaintiff's evidence, we'd move under Rule 50." (Tr. 1161). Smith & Nephew set forth no grounds for the motion and, because patent validity was not part of ArthroCare's case, Smith & Nephew's motion could not have related to issues of validity. On the last day for the presentation of evidence, May 9, 2003, counsel for Smith & Nephew said it was "renew[ing]" the Rule 50 motion it had made on May 7. (Tr. 1549). Smith & Nephew also filed a written Rule 50(a) motion for judgment as a matter of law ("JMOL") that was expressly directed *only* to issues of infringement. (D.I. 400 at 1 n.1). Smith & Nephew verbally "renewed" its Rule 50(a) motion on May 12, 2003, after the close of the evidence, and again did not mention invalidity. (Tr. 1700).

On May 12, 2003, the jury returned a verdict in favor of ArthroCare, finding that all of the asserted claims of the '536, '882, and '592 patents were infringed and not invalid. (D.I. 405). In reaching its verdict, the jury answered all 107 questions in favor of ArthroCare. On June 20, 2003, the Court entered final judgment based on the jury's verdict. (D.I. 452).

Smith & Nephew filed its Rule 50(b) motion for JMOL on June 30, 2003. (D.I. 458). As it did when it moved for summary judgment, Smith & Nephew has taken a "shotgun" approach, arguing that the jury was wrong about every single issue it considered, as if the jury was

incapable of understanding any issue in the case. Smith & Nephew even argues that the jury was wrong about issues that were not submitted to it, including infringement under the doctrine of equivalents, direct infringement of the '592 and '882 patents, and infringement of claim 54 of the '882 patent by Smith & Nephew's "non-suction" Saphyre probes.

SUMMARY OF ARGUMENT

Smith & Nephew's motion should be denied for at least the following reasons:

1. The jury's verdict of infringement of the '536 patent is supported by substantial evidence that the accused products are part of an "electrosurgical system" which includes an "electrically conducting fluid supply." It was undisputed at trial that Smith & Nephew's accused products will not work unless the electrodes are immersed in electrically conducting fluid because the electrically conducting fluid completes a circuit between the generator and the electrodes. There also was substantial evidence that, in arthroscopic surgeries performed with the accused products, electrically conducting fluid was, and indeed must be, directed to the target site from a fluid supply, such as an IV bag or special pump. Contrary to Smith & Nephew's suggestion, there is no requirement that the electrically conducting fluid be delivered to the target site by the probe, only that the probe and the electrically conducting fluid supply form part of a "unitary whole."

2. There is substantial evidence to support the jury's verdict of infringement of the '592 patent. That evidence included the testimony of Smith & Nephew's own witnesses, such as Warren Heim and expert witness Dr. Michael Choti, that when the active electrode is positioned near the target site and energy is applied, there are times when the return electrode is not in contact with the patient's tissue. Smith & Nephew's videotapes of the products in use clearly showed that the return electrode was not contacting tissue at times when energy was applied. As the Court's jury instructions stated, there is "no time limitation" during which the return electrode

must not contact the patient's tissue in order for the asserted claims of the '592 patent to be infringed.

3. Smith & Nephew did not dispute that it infringes the corrected claims of the '882 patent if the certificate of correction is valid, and it failed to carry its burden of proving by clear and convincing evidence that the certificate of correction is invalid. Smith & Nephew *put on no evidence* that one of ordinary skill in the art would not have recognized the error in the claim or how it should be corrected, based on a review of the patent and the prosecution history. Because a certificate of correction is presumed valid, and because it was Smith & Nephew's burden to prove invalidity by clear and convincing evidence, there is nothing to suggest that no reasonable jury could have reached the verdict the jury reached in this case.

4. The jury's verdict of contributory infringement is supported by substantial evidence, including the undisputed evidence that Smith & Nephew's products are designed only to be used with electrically conducting fluid and will not work without it. The jury's verdict also is supported by the testimony of Smith & Nephew witnesses Kate Knudsen and Warren Heim, both of whom admitted that they analyzed ArthroCare's patents and patented products in designing Smith & Nephew's products. The evidence further showed that Smith & Nephew designed the return electrode of each device to be positioned away from the active electrode, which reduces tissue contact, and that the accused products were designed to work without the return electrode contacting tissue. Despite this evidence, Smith & Nephew argues that no reasonable jury could have reached the verdict the jury reached in this case because the evidence that the products are used in arthroscopic surgery was "misleading." The logic of this argument is completely backwards, however. The fact that Smith & Nephew's products are designed for use in arthroscopic surgery is highly relevant evidence of contributory infringement, because electrically conducting fluid (one of the claim limitations) is conventionally used in arthroscopic surgery, as Smith & Nephew's witnesses admitted.

5. There also was substantial evidence to support the jury's verdict that Smith & Nephew induces infringement of the patents-in-suit. In addition to showing that Smith & Nephew directs its customers to use its products in an infringing way, the evidence also showed that Smith & Nephew knew about and examined ArthroCare's patents and patented products in designing the infringing products. The evidence showed that Smith & Nephew instructed its customers to use the accused products only in the presence of electrically conducting fluid, such as saline. Smith & Nephew's witnesses also confirmed that Smith & Nephew intended that the return electrode of the accused products not contact patient tissue when in use. ArthroCare also showed that Smith & Nephew designed all three of its accused products so that the return electrode would not contact the tissue by spacing the return electrode proximally from, or on a different plane than, the active electrode. This design induces infringement because, when the active electrode is positioned close to, or in contact with, the target tissue and high-frequency energy is applied, the return electrode is positioned so that there are times when it is spaced away from the tissue.

6. Smith & Nephew's invalidity allegations must be rejected because Smith & Nephew did not preserve the issue by making a Rule 50(a) motion on invalidity before the case was submitted to the jury. Smith & Nephew's failure to preserve the issue is fatal to its "renewed" Rule 50(b) motion insofar as it relates to invalidity.

7. Even if Smith & Nephew had preserved the issue, there was substantial evidence from which the jury could conclude that Smith & Nephew failed to establish invalidity by clear and convincing evidence. Both of Smith & Nephew's experts on invalidity, Dr. Taylor and Dr. Manwaring, made critical admissions about the prior art which showed that claim limitations were missing from each asserted reference. Moreover, because all of the references Smith & Nephew asserted had been disclosed by ArthroCare to the Patent Office when the patents-in-suit were originally prosecuted or during the '536 Reexamination, Smith & Nephew faced a "more difficult" task in trying to meet its burden of proving invalidity by clear and convincing evidence.

STATEMENT OF FACTS

The relevant facts are set forth in the Argument sections, as appropriate.

ARGUMENT

I. THERE WAS SUBSTANTIAL EVIDENCE FROM WHICH A REASONABLE JURY COULD CONCLUDE THAT SMITH & NEPHEW INFRINGED THE PATENTS-IN-SUIT.

A. The Legal Standard For Judgment As A Matter Of Law.

Smith & Nephew is not entitled to JMOL under Rule 50(b) unless it can show that "there is no legally sufficient evidentiary basis for a reasonable jury to find" in ArthroCare's favor. A Rule 50(b) motion may be granted "only if, as a matter of law, the record is critically deficient of that minimum quantity of evidence from which a jury might reasonably afford relief." *Trabal v. Wells Fargo Armored Serv. Corp.*, 269 F.3d 243, 249 (3d Cir. 2001). In deciding a Rule 50(b) motion, the Court must review the evidence in a "light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference." *Lightning Lube, Inc. v. Witco Corp.*, 4 F.3d 1153, 1166 (3d Cir. 1993). Thus, for Smith & Nephew to prevail on its JMOL motion, it must show that "the evidence and the justifiable inferences therefrom do not afford any rational basis for the verdict." *Bates v. Board of Educ.*, 2000 WL 376405, at *1 (D. Del., Mar. 31, 2001).

A jury's verdict may not be set aside under Rule 50(b) merely because the Court disagrees with the jury's decisions as to the weight or credibility of the testimony presented at trial. *Amsted Indus., Inc. v. Buckeye Steel Castings Co.*, 24 F.3d 178, 183 (Fed. Cir. 1994)) ("It is within the province of the jury to determine the credibility of a witness and the weight to be given his testimony; the jury is not required to accept testimony as true, even if it is uncontradicted."). Nor is JMOL proper simply because the jury did not believe the evidence of the party that lost at trial. *Comark Communs. v. Harris Corp.*, 156 F.3d 1182, 1192 (Fed. Cir. 1998) ("Simply because evidence is offered at trial does not mean that the court must assume the jury believed the

evidence or gave it the same weight as does the profferor of such evidence."). The Court may not substitute its own judgment for that of the jury about the weight of the evidence, the credibility of witnesses, or legitimate inferences that can be drawn from that evidence. *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 151 (2000) ("although the Court should review the record as a whole, it must disregard all evidence favorable to the moving party that the jury is not required to believe.").

In sum, Smith & Nephew cannot prevail on its motion if "a reasonable jury, given the facts before it, could have arrived at the conclusion" of the jury in this case. *TA Instrs., Inc. v. Perkin-Elmer Corp.*, No. 1998 WL 883446, at *2 (D. Del. Dec. 7, 1998). Thus, motions such as Smith & Nephew's "should be granted sparingly." *Lightning Lube*, 4 F.3d at 1166.

B. Smith & Nephew Cannot Seek JMOL On Issues That Were Not Submitted To The Jury.

Smith & Nephew argues that, under Rule 50(b), it is entitled to JMOL on the issues of (1) infringement under the doctrine of equivalents, (2) infringement of claim 54 of the '882 patent by the non-suction models of the Saphyre probe, and (3) direct infringement of the '592 and '882 patents. (D.I. 459 at 5, 6, and 19.). Smith & Nephew does not cite, nor is ArthroCare aware of, any support for this request. Rule 50(b), and the case law applying it (including that discussed above), plainly contemplate an adverse jury verdict as a predicate for a motion for JMOL. *Goodman v. Pennsylvania Turnpike Com'n, 293 F.3d 655, 664* (3d Cir. 2002)("key" to Rule 50 motion is "evidentiary basis for the verdict"); *TI Group Automotive Sys.(North America), Inc. v. VDO North America, L.L.C, 2003 WL 21302951, at *1* (D.Del. June 6, 2003) (analysis of a renewed motion for JMOL following a jury trial required analysis of "jury's verdict" and "jury's findings, presumed or express".) Here, none of the issues Smith & Nephew raises was presented to the jury, none of them was mentioned in closing arguments, and neither the jury instructions nor the verdict form refers to them. As such, Smith & Nephew is not entitled to JMOL on any of these issues.

Moreover, each of the three issues is independently unsuitable for resolution on a motion for JMOL. With respect to the doctrine of equivalents, there is no need for the Court to reach this issue on Smith & Nephew's motion because the jury found literal infringement. *Biotec Biologische Naturverpackungen GmbH v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (finding that because "substantial evidence supports a finding of literal infringement, it is not necessary for us to address the issue of infringement under the doctrine of equivalents."); *Tate Access Floors, Inc. v. Maxcess Techs.*, 222 F.3d 958, 970 (Fed. Cir. 2000) ("Based on [a conclusion of literal infringement], we need not reach the parties' arguments with respect to infringement under the doctrine of equivalents."). As for infringement of the suction claim of the '882 patent, Smith & Nephew acknowledged at trial that claim 54 was not asserted against the non-suction Saphyre probes. (Tr. 1493-94.) As the evolution of the verdict form made clear, Smith & Nephew originally had sought to have the jury render a verdict on Claim 54 for both the Saphyre with suction and without suction, but agreed to change the verdict form so that it only asked about the Saphyre without suction. (*Id.*). With respect to whether Smith & Nephew directly infringes the '882 and '592 patents, ArthroCare never argued at trial that Smith & Nephew directly infringed these two patents or requested a verdict from the jury.

C. The Great Weight Of The Evidence Supports The Jury's Verdict That Smith & Nephew Infringes The '536 Patent.

1. The Evidence At Trial Conclusively Demonstrated That The Accused Devices Are Used In An "Electrosurgical System" Which Includes An "Electrically Conducting Fluid Supply."

Smith & Nephew's argument that no reasonable jury could find that it infringes the '536 patent rests on a false premise: that the Court's construction of the term "system" to mean "an assemblage or combination of things or parts forming a unitary whole" (D.I. 353 at 5), requires that the electrically conducting fluid be delivered to the target site through a fluid path in the

probe. (D.I. 459 at 9). There is nothing in the Court's claim construction, however, that requires the probe to deliver the electrically conducting fluid to the target site.[1] In reaching its construction, the Court rejected Smith & Nephew's proposed construction of this phrase, which would have required that the fluid supply be "in fluid communication with the probe, directing electrically conducting fluid to the electrodes at the end of the probe." (D.I. 270 at 22). Smith & Nephew's present argument, that there can be no infringement because there is no "fluid communication," is simply an improper attempt to reargue this rejected claim construction.

There was substantial evidence at trial that the accused products and the electrically conducting fluid supply used with them meet the "electrosurgical system" limitation of claim 45 as construed by the Court.[2] As Dr. Goldberg testified, when electrosurgical devices like the accused devices are in operation, an electrical circuit is created between the active and return electrodes through the electrically conducting fluid. (Tr. 384, 398). He also testified that the accused devices will only work in electrically conducting fluid. (Tr. 398-99, 405, 412). Smith & Nephew's expert, Dr. Taylor, concurred, testifying that the accused devices require, and will not work without, electrically conducting fluid. (Tr. 1453-54). The jury was free to conclude that this constitutes a system, just as the collection of planets around the sun is commonly referred to as the "solar system," even though the planets are not physically connected to one another or to the sun, as Dr. Goldberg explained. (Tr. 383).

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[1] The fact that the phrase "electrosurgical system" in claim 45 does not require that the probe deliver the fluid to the target site also is shown by comparing claim 1 and claim 45 of the '536 patent. Claim 1 calls for a "fluid delivery element defining a fluid path in electrical contact with the return electrode and the electrode terminal." (JTX 1). Had the inventors intended that claim 45 require that the fluid travels through a "fluid path" down the probe, they could have used the same or similar language as they did in claim 1. That such language is entirely absent from claim 45 demonstrates that the probe need not deliver the fluid to fall within claim 45.

[2] Asserted claims 46, 47, and 56 depend from unasserted claim 45.

Dr. Taylor admitted that a probe is not required to deliver fluid in order for the fluid supply and the probe to be considered an "electrosurgical system." (Tr. 1413-16). Dr. Taylor testified about an alleged prior art reference called the Slager reference. (Tr. 1413). The Slager reference described a test in which an electrode was placed in a dish with saline. (Tr. 1413-14). There was no mention in the article of how the electrically conducting fluid was directed to the target site, much less whether the electrically conducting fluid was delivered through the probe. (Tr. 1415). Yet Dr. Taylor testified that even though the fluid was not delivered through the probe, the components described in the Slager reference nonetheless comprised an electrosurgical system:

> Q: What I am asking, sir, is in this experiment, where you have a dish, you have some tissue in the dish, you have saline that has been put into the dish, you bring an electrode in contact with the tissue, and you apply energy in a generator, that is describing an electrosurgical system. True?
>
> A: Yes.
>
> Q: And it's describing an electrosurgical system even though we don't have any idea how the fluid got into the dish; correct?
>
> A: That's right.
>
> Q: And it's an electrosurgical system even though the fluid didn't come in through the electrode that is described here in Slager; correct?
>
> A: Yes.

(Tr. 1414). Given this testimony, a reasonable jury could conclude that the accused products meet the "electrosurgical system" limitation of claim 45.

In addition, there was substantial evidence that Smith & Nephew itself considered the accused products and the fluid supply used with them to be part of an electrosurgical system, even though the fluid is delivered to the target site by a device other than the probe. For example, the Instructions For Use ("IFU") for the ElectroBlade describes a "Recommended System Configuration" which includes an InteliJet (a pump manufactured by Smith & Nephew) for

providing electrically conducting fluid to the target site.[3] (PX 189 at 3). The InteliJet delivers the fluid directly to the tissue site through a portal as opposed to through the ElectroBlade itself. (Tr. 789-90). Smith & Nephew nonetheless describes the InteliJet and the ElectroBlade as being part of the same "Recommended System Configuration" in its IFU. (PX 189 at 3).

At trial, Smith & Nephew argued that the ElectroBlade IFU did not describe the ElectroBlade and the InteliJet as part of a "system" because the word "system" was allegedly used as an adjective, not a noun. (Tr. 1039). This is plainly incorrect. The IFU uses the word "system" repeatedly as a noun: "the system should be tested," "the configured system exceeds," "retest the system," "this system must be certified," and "this system." (PX 189 at 3). The jury was reasonably entitled to interpret the IFU as an admission that a "system" included a fluid supply and a probe that were not physically connected to each other.

2. The Evidence Demonstrated That The Infringing Products Are Part Of An Electrosurgical System Which Includes A Fluid Supply "For Directing Fluid To The Target Site."

ArthroCare also introduced substantial evidence from which a reasonable jury could conclude that the infringing products are part of a system with a fluid supply "for directing fluid to the target site" as required by the asserted claims of the '536 patent.[4] Dr. Goldberg, Dr. Choti, and Mr. Sparks all testified that in arthroscopic surgery, the entire joint space must be filled with an electrically conducting fluid in order to allow the surgeon to visualize and operate on target sites in the joint. (Tr. 399, 727, 848 (according to Dr. Choti, "one purpose of the fluid in the joint

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[3] Smith & Nephew's attempts to diminish the significance of this document by claiming that the system recommended in the IFU was only recommended for Europe should be rejected. (D.I. 459 at 9 n.1). The IFU states that "this recommended system configuration complies" with European standards, not that the recommendation only applies to systems used in Europe. (PX 189 at 3).

[4] Smith & Nephew never argued at trial that the accused products do not meet the "directing fluid to the target site" limitation.

space is to distend it to allow as much space as possible to work with instruments"). As Dr. Goldberg further testified, all of the surfaces of the joint space are in contact with the electrically conducting fluid as a result of the joint space being filled with fluid. (Tr. 429-30). In this way, electrically conducting fluid is delivered to the target site during arthroscopic surgery. (*Id.*).

Similarly, Smith & Nephew's own documents introduced into evidence show that the electrically conducting fluid is directed to the target site. Smith & Nephew's "Supplemental Clinical Training Checklist" for the ElectroBlade required surgeons to confirm that they understood that the active and return electrodes must be "completely surrounded by irrigant fluid" before the application of RF energy. (PX 197 at SN46968). The Control RF IFU instructs doctors to "ensure that the probe tip is completely surrounded by conductive irrigant solution during use." (PX 205). As for the Saphyre, the Saphyre Sales Guide states that "a conductive irrigation solution, such as Lactated Ringers or sterile saline is required for arthroscopic surgical procedures." (PX 390 at 12). The jury was also shown multiple video clips made by Smith & Nephew and Dr. Choti which showed the accused devices in operation. (PX 105, DTX 315, DTX 316, DTX 897)). These clips all showed fluid that had been delivered to the target site, as the tissue was shown completely submerged under saline. (*Id.*, Tr. 724-25). According to Dr. Choti, his video clips depicted the devices in use during what he considered a "normal procedure." (Tr. 724). This was substantial evidence that the electrically conducting fluid is directed to the target site.

In essence, Smith & Nephew is seeking to re-litigate its rejected claim construction. In its claim construction brief, Smith & Nephew argued that the phrase "directing electrically conducting fluid to the target site" should be construed to mean that the electrically conducting fluid "is caused to flow directly to the tissue being operated on in the patient's body." (D.I. 246 at 31). The Court rejected this argument, finding instead, as ArthroCare had urged it to, that no construction was necessary and that "the phrase shall be construed consistently with its ordinary

meaning." (D.I. 353 at 3). The jury was free to find that the ordinary meaning of "directing fluid to the target site" covers the use of a catheter that floods the target tissue with fluid.

D. There Was Substantial Evidence From Which A Reasonable Jury Could Conclude That Smith & Nephew Infringes The '592 Patent.

1. The Jury's Verdict That The Accused Products Meet The "Not In Contact/Spaced Away" Limitations Of The '592 Patent Is Supported By Substantial Evidence.

In disputing the jury's verdict that it infringes the '592 patent, Smith & Nephew attempts to reargue the claim construction arguments it made, and lost, before trial. In its claim construction brief, Smith & Nephew argued that the "not in contact/spaced away" limitations of the '592 patent "require that the return electrode be kept away from, and not [be] allowed to touch any portion of the body structure during surgery." (D.I. 246 at 26). The Court rejected this position, and construed claims 1 and 23 of the '592 patent to require only that "the return electrode is not to contact the body structure at all during the performance of the claimed method." (D.I. 353 at 2). The Court also ruled that "[t]he claimed method does not contain any time limitations." (D.I. 354 at 7). Thus, under the Court's construction, infringement occurs if all of the claimed steps occur even for a short time.

As Dr. Goldberg's testimony made clear, and as ArthroCare properly argued to the jury, the use of the accused products infringes because there are times when all of the other limitations of the claims are being performed and the return electrode is not in contact with tissue. (Tr. 421-22, 424-25, 426-27). This occurs because, among other things, the accused products were designed with the return electrode spaced back from, and in the case of the Saphyre and Control RF, on a different plane than, the active electrode. (Tr. 397, 424, 427).

At trial, Smith & Nephew effectively admitted that the use of its products meets the "not in contact/spaced away" limitations. One of Smith & Nephew's experts, Dr. Choti, readily

conceded that when the active electrode is positioned near the target site and energy is being applied, there are times when the return electrode of each accused product is not in contact with tissue. (Tr. 743-44). Dr. Choti and Smith & Nephew also recorded video clips of his testing of the accused products in operation which showed the devices in use with the return electrode not in contact with tissue while all of the other limitations were being met. (PX 105). According to Dr. Choti, this testing was intended to show how the devices would work during a normal procedure. (Tr. 724). Ms. Drucker, the ElectroBlade project manager, and Ms. Knudsen, the Saphyre project manager, both acknowledged that these clips demonstrated that there were times when the return electrodes of the ElectroBlade and the Saphyre were not in contact with tissue when energy was being applied. (Tr. 985, 1036). Warren Heim, Smith & Nephew's consultant, testified that the Control RF and ElectroBlade were designed so that the return electrode would not be in contact with the tissue when the devices were in use. (Tr. 957-58, 581-82). Likewise, Joan McCreary, the Saphyre marketing manager, and Dr. Choti testified that it is not necessary for the return electrode of the Saphyre to be in contact with tissue for it to work. (Tr. 555, 725). This is substantial evidence in support of the jury's verdict.

Smith & Nephew's own documents also demonstrate that there are times when all of the other limitations of claims 1 and 23 are met and the return electrode is not in contact with tissue. For example, the Saphyre Sales Guide warns that "care should be taken to prevent tissue contact with the return electrode on the Saphyre probe shaft." (PX 390 at 41). A Smith & Nephew document, entitled "Competitive Selling ArthroCare," teaches that the active electrode of the Saphyre should be held level against the tissue to be ablated. (PX324 at ORA65090) ("During use, keep the electrode level with the target tissue for optimal evacuation of bubbles."). Given the geometry of the probe, the return electrode will not contact the tissue when Smith & Nephew's instructions are followed because the return electrode is spaced back from, and on a different plane than, the active electrode.

With respect to the ElectroBlade, Smith & Nephew's Sales Training CD instructs users to "ensure that the entire tip including the return electrode is immersed in saline," to "[p]resent" the active electrode (not the return electrode) to the tissue, and "to use suction to pull bleeding tissue to the blade for coagulation." (PX 199 at 7, 11). Because the return electrode is located distally from and behind the blade, following these instructions will result in the return electrode contacting fluid, not tissue.

For the Control RF, the IFU tells doctors to be sure that the active and return electrodes are "completely surrounded" by electrically conducting fluid during use. (PX 205). Due to the spacing of the return electrode proximally from, and on a different plane than, the active electrode, the use of the Control RF according to these instructions will result in times when there is no tissue contact. (Tr. 424). All of this is substantial evidence from which a reasonable jury could conclude that the use of the accused products meet the "not in contact/spaced away" limitations.

2. ArthroCare's Evidence With Respect To The "Not In Contact/Spaced Away" Limitations Was Not Improper.

Smith & Nephew does not dispute that there are times when the return electrode is not in contact with tissue and all of the other limitations are met. (D.I. 459 at 12). Instead, it raises a litany of alleged improprieties with the overwhelming evidence ArthroCare presented on infringement.

Foremost among Smith & Nephew's complaints is that ArthroCare ignored the Court's claim construction and instead used a "rejected" claim construction to demonstrate infringement of the "not in contact/spaced away" limitations.[5] (D.I. 459 at 10-11). Smith &

[5] ArthroCare's evidence cannot be based on a "previously rejected" claim construction because ArthroCare did not propose a claim construction for these limitations. Indeed, ArthroCare took the position that the meaning of the "not in contact" limitations was clear and that no construction was needed. (D.I. 270 at 49).

Nephew is wrong. The Court's construction requires only that "the return electrode is not to contact the body structure at all during the performance of the claimed method." (D.I. 353 at 2). As the Court made clear in ruling on summary judgment, "the claimed method does not contain any time limitations." (D.I. 352 at 7). Thus, the claimed method is performed when the active and return electrodes are in the presence of electrically conducting fluid, energy is applied, and the return electrode is not in contact with tissue. There can be no dispute that ArthroCare presented substantial evidence, discussed above, that there are times when these limitations are met by the accused devices.

It is Smith & Nephew that relies on a rejected claim construction. The Court declined to adopt Smith & Nephew's proposed construction that the return electrode must not contact tissue at any time during the entire surgery. (D.I. 353 at 2, D.I. 246 at 26). In its summary judgment Opinion, the Court stated that "defendant does not dispute that, at times during surgery, the return electrode of the accused product is not in contact with the body structure and each of the three steps of the claimed method are performed. The Court, therefore, finds that the use of the Saphyre product literally infringes claim 1 of the '592 patent." (D.I. 352 at 7). The Court instructed the jury that "[t]he claimed method does not contain any time limitations. Thus, the claimed method is performed when each of the three steps of the claim has been completed." (Tr. 1718). The jury was also instructed that infringement occurs so long as the accused devices "operate in a way that meets each and every step of the method described in the claim some of the time." (Tr. 1716). Smith & Nephew now pretends that the claim construction was something different than it was because that is the only way it can argue that it does not infringe.

Smith & Nephew also argues that ArthroCare attempted to "mislead" the jury when it showed still images from video clips depicting the accused devices performing the claimed methods. (D.I. 459 at 12 n.8). This argument must fail. Smith & Nephew did not object at trial

to any of the uses of the still images about which it now complains.[6] Moreover, Smith & Nephew and ArthroCare proffered, and played for the jury, longer video clips from which the still images were taken. Like the longer video clips themselves, the still images simply showed that the active electrode was near the tissue, that both the active and return electrodes were submerged in electrically conducting fluid, and that the return electrode was not in contact with the tissue while energy was being applied.

Contrary to Smith & Nephew's assertions, ArthroCare did not argue that the return electrode must always be in contact with the tissue in order not to infringe the '592 patent. (D.I. 459 at 10-11). Rather, Dr. Goldberg and counsel for ArthroCare made clear that literal infringement occurs when the return electrode is not in contact with the tissue and all of the other limitations are met. Indeed, ArthroCare's counsel acknowledged that there was no literal infringement at those times when the return electrode was in contact with tissue. (Tr. 1580-81). ArthroCare's evidence and arguments squarely met the Court's claim construction and were not misleading.

3. It Was Not Unreasonable For The Jury To Reject Smith & Nephew's Argument That Occasional Contact By The Return Electrode Negates Other Instances Of Infringement.

Smith & Nephew's contention that the use of its products does not infringe because the return electrode occasionally contacts the tissue has no merit. (D.I. 459 at 13). Smith & Nephew's argument seems to suggest that if a surgeon is performing all of the steps of the claimed methods for three seconds and then, in the fourth second, the return electrode contacts the tissue, there was no infringement in the first three seconds and there could not be any infringement thereafter.

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[6] ArthroCare was precluded from using still images from these video clips with Dr. Goldberg as part of his direct testimony. Thus, ArthroCare was forced to rely on the video clips that Smith & Nephew used to examine witnesses, which is precisely what it did.

Smith & Nephew's argument is incorrect because it runs afoul of the Court's jury instruction on the "not in contact/spaced away" limitation, which stated that "there is no time limitation on this claim term," and the Court's instruction on imperfect infringement, which stated that infringement occurs so long as the accused devices "operate in a way that meets each and every step of the method described in the claim some of the time." Using the example above, and in light of these instructions, the jury reasonably concluded that return electrode contact in the fourth second of a procedure does not negate infringement during the first three seconds.

4. ArthroCare Presented Substantial Evidence That Doctors Do Not Touch The Return Electrode To Tissue During Use Of The Accused Products.

Contrary to Smith & Nephew's assertions, ArthroCare presented substantial evidence that the accused devices were used in an infringing way. There was no requirement that ArthroCare present direct evidence that doctors do not touch the return electrode to tissue. (D.I. 459 at 13). As the jury was instructed, circumstantial evidence is no less persuasive than direct evidence. (Tr. 1706).

There was ample circumstantial evidence from which the jury could conclude that a doctor used the accused devices for some period of time without the return electrode contacting tissue. This can be inferred from the design of the accused products themselves. (PX 113A, PX 113B, PX 544, PX 732). For example, the evidence showed that the return electrodes are spaced away from, and on a different plane than, the active electrode, and therefore that the accused products were designed so that the return electrode would not contact tissue. (Tr. 397). Warren Heim also admitted that the return electrodes on both the Control RF and the ElectroBlade were designed not to contact tissue. (Tr. 581-82). In addition, the video clips recorded by Smith & Nephew's expert Dr. Choti and played to the jury (PX 105) showed that the return electrode was not in contact with tissue when the devices are in use during a "normal procedure." (Tr. 724).

All of this supports the reasonable inference that doctors used the devices for some period of time without the return electrode contacting tissue.

The jury also could have concluded that doctors used the probes for some period of time without the return electrode contacting tissue from the evidence that Smith & Nephew instructed users not to contact the return electrode with tissue, including its own IFUs, Sales Guides, and Sales Training CD for the accused products. The jury reasonably could have inferred that doctors followed these instructions.

E. A Reasonable Jury Could Conclude That Smith & Nephew Had Not Met Its Burden Of Proving By Clear And Convincing Evidence That The Certificate Of Correction For The '882 Patent Is Invalid.

1. Smith & Nephew Put On No Evidence That The Certificate Of Correction Was Invalid.

At trial, Smith & Nephew did not contest that its accused products infringe the asserted claims of the '882 patent as corrected by the certificate of correction. Smith & Nephew's entire noninfringement case was based on its argument that the certificate of correction is invalid. To prove that the certificate of correction is invalid, however, Smith & Nephew had to show by clear and convincing evidence that one skilled in the art would not recognize the error in the originally issued claim or know how to fix it in light of the patent and the prosecution history. (Tr. 1733-34); *Superior Fireplace Co. v. The Majestic Prods. Co.*, 270 F.3d 1358, 1370 (Fed. Cir. 2001).

Despite its burden, Smith & Nephew presented no expert testimony about what one of ordinary skill in the art would have understood about the errors in claim 1. In the face of Smith & Nephew's failure to offer any evidence, the jury was entitled to conclude that Smith & Nephew had not met its burden.

In addition, there was substantial evidence that the certificate of correction was valid. First, the evidence at trial showed that the error was the result of a typographical or clerical error in a March 25, 1997 amendment, namely the failure to change the phrase "active electrode" to

"electrode terminal" in two of the 19 places where it appeared in the claims. Mr. Raffle, who drafted the March 25, 1997 amendment, explained that he had "wanted to make a global amendment" to change "active electrode" to "electrode terminal" every time it appeared in the claims. (Tr. 1524-26). From this testimony, the jury was free to conclude that a person of ordinary skill would have seen that the change had been made 17 out of 19 times and, in the two places that it was not made, the phrase "active electrode" should have been changed to "electrode terminal."

Second, as Mr. Raffle testified, the phrase "the active electrode" technically lacked an antecedent basis in uncorrected claim 1, because the precise words – "an active electrode" – had not been used earlier in the claims. (Tr. 1515-16). The Court, however, construed the phrase "electrode terminal" to mean "one or more active electrodes." (Tr. 1719). From this, the jury reasonably could have inferred that a person of ordinary skill looking at the uncorrected claim would have realized that the reference to "the active electrode" after the reference to "an electrode terminal" was a typographical or clerical error, that the drafter had intended to refer to the same electrode, and that the phrase "the active electrode" should have been "the electrode terminal."

Given all of this, the jury could reasonably conclude that a person of ordinary skill would know what the error was (not changing "active electrode" to "electrode terminal" all 19 times) and how to fix it (change "active electrode" to "electrode terminal" as Mr. Raffle had done 17 other times).

Despite this, and with no evidence to support its invalidity argument, Smith & Nephew argues that no reasonable jury could have rejected the inferences urged by its attorneys. Those inferences, however, were reasonably rejected by the jury.

First, Smith & Nephew argues that Mr. Raffle's failure to change "active electrode" to "electrode terminal" in one place in claim 26 with the December 17, 1997 request for certificate of correction supports the inference that the error in claim 1 and its correction were not clear.

(D.I. 459 at 18-19). The request for certificate of correction, however, is of no significance to whether the error in the uncorrected language of claim 1 and its correction would have been clear to one of ordinary skill. The fact that there may have been an error in the request for certificate of correction does not establish that the error in claim 1 was not clear; it only establishes an error in the request for certificate of correction.

Second, Smith & Nephew argues that Mr. Raffle's failure to change "active electrode" to "electrode terminal" in one place in each of claims 1 and 26 means that the error in claim 1 was not "manifest." (D.I. 459 at 15-16). This argument makes no sense. Anyone reviewing the file history would see immediately that the drafter of the March 25, 1997 amendment had intended to change "active electrode" to "electrode terminal" every place it appeared, and that nowhere in the amendment was the phrase "electrode terminal" changed to "active electrode." Thus, the fact that an error was made as to claim 26 as well as claim 1 shows only that an error was made in both claims, not that the error in claim 1 was not "manifest."

Third, Smith & Nephew argues that Mr. Raffle was motivated to amend claim 1 in order to sue Ethicon. (D.I. 459 at 19). There is no basis for this argument. If this were correct, Mr. Raffle would have been motivated to amend claim 26 as well, which contained the same errors as claim 1. But Mr. Raffle did not amend claim 26.

Smith & Nephew's final argument on the '882 patent is that ArthroCare did not object to the examiner's inclusion of the uncorrected claim language in his statement of reasons for allowance. (D.I. 459 at 17-18). This proves nothing, however, other than that the examiner repeated the typographical or clerical error in the statement of reasons for allowance. Moreover, there was no reason for ArthroCare to respond to the statement because the claims were allowed. This is much different than the situation in *Superior Fireplace* where the patentee had engaged in

a substantial, back-and-forth exchange with the examiner over patentability. *Superior Fireplace*, 270 F.3d at 1370.[7]

F. There Was Substantial Evidence From Which A Reasonable Jury Could Find Contributory Infringement.

1. The Evidence Showed That The Accused Products Are Specially Designed To Infringe.

There was strong evidence that the accused products were specially designed to infringe. Both Kate Knudsen and Warren Heim testified that they were aware of ArthroCare's patents covering bipolar electrosurgical devices long before the design of the infringing products was complete, and that Mr. Heim wrote a report to Smith & Nephew analyzing the patents. (Tr. 936-37, 991, PX 735 at 23-24). Smith & Nephew also tested and evaluated ArthroCare's patented products while designing its own products. (Tr. 377-78, 586-90, 593-94, 951, PX 240). Substantial evidence showed not only that the accused products cannot work without electrically conducting fluid, but also that they are designed so that the return electrode will not contact tissue. (Tr. 415-19, 397-98, 405, 412, 949). From this, it was reasonable for the jury to conclude that the accused products were specially designed to infringe.

Smith & Nephew's argument that it was "facially misleading and prejudicial" for ArthroCare to present evidence showing that the accused devices are used in arthroscopic surgery is absurd. (D.I. 459 at 20). It was undisputed at trial that Smith & Nephew encourages doctors to use its accused products in arthroscopic surgery and that the accused products are *contraindicated* for any other procedure. (Tr. 499-500). The witnesses who testified on this point were unanimous that arthroscopic surgery is performed by flooding the joint space with an electrically

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[7] Smith & Nephew's citation to *Elkay Mfg. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999), *cert. denied*, 529 U.S. 1066 (2000), also is inapposite because that case dealt with the effect on claim construction of the applicant's silence in the face of a statement by the examiner, not whether an error in a patent claim was clear.

conducting fluid and performing the surgery with the probe and target tissue immersed in the fluid. (Tr. 483-96, 548-53, 847-49). Such evidence that the accused products are used in arthroscopic surgery is not improper and, to the contrary, supports a finding that the accused products were specially designed to infringe.

2. The Evidence Was Conclusive That There Are No Substantial Noninfringing Uses Of The Accused Products.

Smith & Nephew's argument that there are substantial noninfringing uses for the accused devices fails because the evidence showed that the devices were designed to infringe and that any noninfringing use is occasional and inadvertent. *Preemption Devices v. 3M*, 630 F. Supp. 463, 471 n.10 (E.D. Pa. 1985), *aff'd in part*, 803 F.2d 1170 (Fed. Cir. 1986) ("occasional and aberrant use of these products, where they are clearly designed to be used in a system specified in the claims of a patent, does not rise to the level of 'a staple or commodity of commerce suitable for substantial noninfringing use'"). Smith & Nephew's only arguments as to substantial noninfringing uses, all of which lack merit, are directed to the "not in contact/spaced away" limitations of the '592 patent, the "vapor layer" limitation of the '882 patent, and the "electrosurgical system" limitation of the '536 patent.

With respect to the '592 patent, Smith & Nephew contends that use of the accused devices without the return electrode touching tissue is a substantial noninfringing use. (D.I. 459 at 21). For the Saphyre, there was substantial evidence that it was designed so that the return electrode would not contact tissue because the return electrode is spaced back from, and on a different plane than, the active electrode. (Tr. 397). There was also evidence that return electrode contact is not necessary for the Saphyre to work. (Tr. 555, 725). Moreover, all of the video clips shown at trial clearly demonstrated that there were many times when the return electrode was not in contact with tissue while the accused devices were being used. (PX 105, DTX 316, DTX 316, DTX 897). Smith & Nephew told its representatives to warn doctors in its

not to contact the return electrode with tissue. (PX 381, PX 390). This evidence was buttressed by a Smith & Nephew document entitled "Competitive Selling ArthroCare," which teaches doctors to hold the face of the active electrode of the Saphyre probe parallel with the tissue in order for the probe to ablate as intended. (PX 324 at ORA 65095). Based on the geometry and location of the active electrode, this demonstrates that the return electrode will not contact tissue when the probe is used as Smith & Nephew recommends.[8]

As for the ElectroBlade, Warren Heim testified that the return electrode was not intended to contact tissue when the device is in operation. (Tr. 581-82). In addition, the fact that the ElectroBlade is designed so that the return electrode is spaced proximally from the active electrode, and need not contact tissue for the device to work, shows that the return electrode was not intended to contact tissue. (Tr. 424, 727). Smith & Nephew's ElectroBlade IFU also warns doctors to keep the electrodes fully immersed in electrically conducting fluid, which supports the reasonable inference that Smith & Nephew instructed doctors not to contact tissue with the return electrode. (PX 189, PX 205). Moreover, Smith & Nephew instructs doctors to use the suction in the ElectroBlade to pull tissue into the active electrode blades and "present the smooth blade [active electrode] surface to the tissue," both of which mean that the return electrode is not in contact with tissue when the device is in use. (PX 199 at 7).

With respect to the Control RF, Mr. Heim admitted that the return electrode was not intended to contact the tissue. (Tr. 581-82, 957-58). The return electrode of the Control RF is also spaced back from, and on a different plane than, the active electrode, and thus is not in

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[8] Smith & Nephew takes the testimony of Dr. Goldberg out of context on this point. Smith & Nephew's quotes Dr. Goldberg as testifying that when the probes are in use, "as the videotape and Mr. Marsden suggested, very clearly there is occasional contact frequently . . ." (D.I. 459 at 21). Smith & Nephew omits the rest of Dr. Goldberg's testimony, however, in which he stated "but often there isn't." (Tr. 423). As is clear, Dr. Goldberg was merely repeating what Mr. Marsden had said, and clarifying that often the return electrode is not in contact with the tissue when the probes are in use.

contact with the tissue. (Tr. 424) The evidence also showed that the return electrode of the Control RF need not contact tissue in order for the device to work. (Tr. 725).

From all of this evidence, the jury reasonably could conclude that use of the accused products with the return electrode in contact with the tissue is not a substantial non-infringing use.

Smith & Nephew's argument on the '882 patent, that a substantial noninfringing use of the Saphyre and Control RF probes is to use them for coagulation (as opposed ablation) and thus not form a "vapor layer," is baseless. (D.I. 459 at 21). As an initial matter, Smith & Nephew calls the probes "ablation" probes in its IFUs and Sales Guides. (PX 381, PX 390, PX 593 at 11). Moreover, the Sales Guides for both probes indicate that they are intended primarily for ablation, even though they also can provide coagulation. (PX 390 at 10; PX 593 at 29). The evidence also showed that Smith & Nephew markets the Saphyre and Control RF for use in the ablation, not coagulation, segment of the arthroscopy market. (PX 390 at 4, PX 593 at 5). As such, there is no basis on which to disturb the jury's finding that there are no substantial noninfringing uses for the Saphyre and Control RF that do not include a vapor layer.

As for the '536 patent, the evidence showed – contrary to Smith & Nephew's arguments – that using "the probes as part of an electrosurgical system that does not have a fluid supply as part of a 'unitary whole'" is not a substantial noninfringing use. (D.I. 459 at 21). All of the witnesses at trial agreed that the accused devices must be used with electrically conducting fluid. (Tr. 398, 405, 412, 848, 1013). Moreover, Dr. Goldberg, Ms. Drucker, and Mr. Sparks all testified that electrically conducting fluid must be delivered to the target site in arthroscopic surgery. (Tr. 483, 814, 1013-14). From this evidence, the jury was free to conclude that the use of the probes without an electrically conducting fluid supply is not a substantial noninfringing use.

G. There Was Substantial Evidence From Which A Reasonable Jury Could Conclude That Smith & Nephew Induces Infringement.

Both the design of the accused devices and Smith & Nephew's instructions to doctors about using them are strong evidence of inducement of infringement. As discussed above, the accused products are designed so that they need electrically conducting fluid to work. (Tr. 398, 405, 412, PX 189, PX 205). There also was substantial evidence that electrically conducting fluid must be delivered to the target site in order for a circuit to be completed between the active and return electrodes. (Tr. 398-99, 405, 412). Moreover, the accused products are designed so that the return electrode does not contact tissue due to the spacing and geometry of the electrodes, and the jury was shown video clips which bore this out. (PX, 105, DTX 315, DTX 316, DTX 897). The jury reasonably could conclude that the design of the accused devices induces doctors to infringe. (PX 197, PX 350, PX 462A, PX 510).

In addition, there was substantial evidence at trial that Smith & Nephew instructs and trains doctors to use the accused products in an infringing way. The IFUs for both the ElectroBlade and Control RF instruct doctors that the devices are contraindicated for procedures where electrically conducting fluid is not used. (PX 189, 732). The testimony was clear that these IFUs are included in the package of every accused device sold by Smith & Nephew. (Tr. 550-51, 565). Similarly, Smith & Nephew's Saphyre Sales Guide states that a conductive irrigation solution is "required" to be used with the Saphyre. (PX 390 at 11). Moreover, Smith & Nephew's Sales Guides, IFUs, Sales Training CD, and "Competitive Selling ArthroCare" document show that Smith & Nephew instructs doctors not to contact tissue with the return electrode. (PX 189, PX 199, PX 324, PX 381, PX 390, PX 593, PX 732).

Smith & Nephew's argument that ArthroCare presented evidence of copying which was "highly prejudicial" and an "*ad hominem* attack" is baseless. (D.I. 459 at 22-23). The evidence showed that Smith & Nephew engineers knew about and read ArthroCare's patents long before Smith & Nephew launched the infringing products. For example, Ms. Knudsen admitted that she

had read ArthroCare's patents before the Saphyre design was completed. (Tr. 991). The evidence showed that Mr. Heim had read and analyzed two of the three patents-in-suit before Smith & Nephew even began its design of the Control RF and ElectroBlade. (Tr. 936-37 and PX 735 at 23-24). There was also testimony that both Mr. Heim and Ms. Knudsen had evaluated ArthroCare's patented products in designing the infringing products. (Tr. 951 & 977-78). Such evidence is strong circumstantial evidence, which the jury was entitled to accept, that Smith & Nephew "knew or should have known that its encouragement and instruction would likely result in" doctors using the accused products to directly infringe, as required by the Court's jury instructions for a finding of inducement. (Tr. 1724).

II. SMITH & NEPHEW MAY NOT RAISE INVALIDITY IN A RULE 50(B) MOTION BECAUSE IT FAILED TO PRESERVE THE ISSUE.

Smith & Nephew's motion with respect to invalidity must be denied because it failed to preserve the issue under Rule 50(a) before the case was submitted to the jury. A Rule 50(a) motion must specifically set forth the grounds on which relief is sought, and the failure to do so renders a subsequent Rule 50(b) motion on any unidentified issue "constitutionally impermissible." *Duro-Last v. Custom Seal, Inc.*, 321 F.3d 1098, 1107 (Fed. Cir. 2003) (holding that a Rule 50(b) movant "waived its right to file a post-verdict JMOL motion on obviousness because its pre-verdict JMOL motion raised only the issues of inequitable conduct and the on-sale bar."); *Foster v. Nat'l Fuel Gas Co.*, 316 F.3d 424, 429 (3d Cir. 2003) ("The requirement that the *specific issue* be raised first in the motion for a directed verdict, before the issue is submitted to the jury, affords the non-moving party an opportunity to reopen its case and present additional evidence.") (emphasis added); *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1187 (Fed. Cir. 2002) (reversing grant of JMOL where plaintiff moved on some invalidity issues before the case was submitted to the jury, but "did not make a motion for JMOL

on enablement before the case was submitted to the jury. As such, it was not entitled to move for JMOL on the issue after the verdict.").

Smith & Nephew never made a Rule 50(a) motion on invalidity. Smith & Nephew made an oral motion under Rule 50(a) at the close of ArthroCare's case. (Tr. 1161). This could not have been directed to the issue of validity, however, because validity was not a part of ArthroCare's case. Later in the trial, on May 9, 2003, Smith & Nephew "renewed its Rule 50 motion," but never expanded its motion to include validity. (Tr. 1549). On the same day, Smith & Nephew filed a written motion for judgment as a matter of law which was directed solely to issues of infringement. (D.I. 400 at 1 n.1). On May 12, 2003, counsel for Smith & Nephew said, "I believe I renewed our motion on Friday. To the extent I didn't, I renew it now before you charge the jury." (Tr. 1700). None of this constitutes a motion under Rule 50(a) on the issue of validity. As a result, Smith & Nephew's motion for JMOL on invalidity should be denied.

III. A REASONABLE JURY COULD CONCLUDE THAT SMITH & NEPHEW FAILED TO MEET ITS BURDEN OF PROVING INVALIDITY BY CLEAR AND CONVINCING EVIDENCE.

If, notwithstanding the foregoing, the Court decides to address Smith & Nephew's invalidity arguments, those arguments should be rejected in any event.

A. The Jury Was Free To Disregard The Unpersuasive Testimony Of Smith & Nephew's Expert Witnesses On Invalidity And Find That Smith & Nephew Failed To Meet Its Burden.

At the heart of Smith & Nephew's argument on invalidity is its legally incorrect contention that the jury had to accept the testimony of its expert witnesses on invalidity simply because the testimony was not contradicted by the testimony of an expert witness for ArthroCare. (D.I. 459 at 24). This, of course, is not the law. "Patent owners are never in law required to prove facts establishing validity." *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 1511 (Fed. Cir. 1984). Where there is a verdict of validity, "the question is not whether the patentee

had introduced sufficiently substantial evidence to support the verdict, but whether the challenger's evidence so met the burden imposed by 35 U.S.C. § 282 that reasonable jurors could not have concluded that the challenger failed to overcome that burden." *Perkin-Elmer Corp. v. Computer Vision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984) (applying Third Circuit law). Thus, "a jury or a court may reach a conclusion that a patent remains valid *solely* on the failure of the patent challenger's evidence to convincingly establish the contrary." *Orthokinetics, Inc., v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1570 (Fed. Cir. 1986) ("A patent being presumed valid at birth, a patentee need submit *no* evidence in support of a conclusion of validity by a court or a jury.") (emphasis original).

In order to succeed on its anticipation defense, Smith & Nephew had to prove by clear and convincing evidence that every limitation of ArthroCare's asserted claims was contained either expressly or inherently in a single prior art reference. *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1374 (Fed. Cir. 2001). Under the doctrine of inherency, if an element is not expressly disclosed in a prior art reference, the reference will not be deemed to anticipate a subsequent claim unless the missing element "is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002).

Smith & Nephew's clear and convincing burden was more difficult to meet in this case because all of the asserted references had been before the PTO during the original prosecution of the patents-in-suit or the '536 Reexamination. *BOC Healthcare, Inc. v. Nellcor, Inc.*, 892 F. Supp. 598, 602 (D. Del. 1995) (when the references at issue are the same references that were before the PTO, "the burden on the party asserting invalidity is more difficult to meet."); *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc*, 796 F.2d 443, 447 (Fed. Cir. 1986), *cert. denied*, 484 U.S. 823 (1987). Thus, Smith & Nephew must show not only that no reasonable jury could find that it failed to meet its burden of showing invalidity by clear and convincing evidence,

Smith & Nephew must do so in light of the fact that its burden was "more difficult" to meet with respect to the references that had been cited to the PTO.

B. Smith & Nephew Failed To Show That The '536 Patent Was Anticipated.

1. The Jury's Verdict That The Pao '499 And Doss '007 Patents Do Not Anticipate Should Not Be Disturbed.

Both the Pao '499 patent and the Doss '007 patent were cited to the examiner during the prosecution of the '536 patent, and the examiner allowed the claims over them. (JTX 1). As a result, the jury's verdict must be viewed in light of the fact that Smith & Nephew's burden of proving anticipation by clear and convincing evidence was "more difficult" to meet. *BOC Healthcare, Inc.*, 892 F. Supp. at 602.

With respect to the Pao '499 patent, a reasonable jury could conclude that Smith & Nephew failed to show that it discloses a "current flow path" through electrically conducting fluid, as required to anticipate claims 46 and 56.[9] Dr. Taylor, the only Smith & Nephew witness to testify about the Pao '499 patent, agreed on cross-examination that it discloses not only placing both electrodes in contact with the tissue, but actually inserting the electrodes into the tissue. (Tr. 1409-12).[10] This is clear from the Pao '499 patent itself, which Dr. Taylor agreed teaches that "the end of the probe region is placed against the tissue causing the first ends of the axial and outer electrodes respectively to come into contact with the tissue." (Tr. 1407-8). Dr. Taylor also agreed that the Pao '499 patent discloses that electrical current "flows through the tissue between

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[9] The "current flow path" limitation appears in independent claim 45, from which claims 46 and 56 depend.

[10] Contrary to Smith & Nephew's assertion (D.I. 459 at 26), ArthroCare's cross examination of Dr. Taylor on the Pao '499 patent was directed to the "current flow path" limitation of claim 45, not the "return electrode being sufficiently spaced limitation" of claim 47. (Tr. 1408-12).

the axial and outer electrodes." (Tr. 1408). The jury was entitled to conclude from this evidence that the Pao '499 patent does not disclose the claimed current flow path through electrically conducting fluid.

As for the Doss '007 patent, Smith & Nephew failed to show that it discloses a "connector near the proximal end of the shaft," as required by the asserted claims of the '536 patent. In fact, Dr. Taylor admitted that there was no disclosure in the Doss '007 patent of the location of a connector at all. (Tr. 1400) (agreeing that "there is no specific mention of the location of" the connector). Despite this admission, Smith & Nephew makes the unsupported argument that "a wire that passes out of the proximal end" of the device disclosed in the Doss '007 patent "would be a connector." (D.I. 459 at 29). Even if there were testimony in the record to this effect, which there is not, this argument makes no sense because a wire is described as a conductor, not a connector, in the '536 patent. (JTX 1 at 10:49-57). Moreover, the mere presence of wire passing out of the proximal end of a device does not show a connector near the proximal end of the shaft. To the contrary, the wire could run from the tip of the device all the way to the power supply, thus rendering the phrase "near the proximal end of the shaft" meaningless.

Smith & Nephew also failed to show that the Doss '007 patent anticipates the '536 patent because there is no disclosure of a return electrode in that reference. ArthroCare's cross-examination of Dr. Taylor clearly established that both electrodes disclosed in the Doss '007 patent are active electrodes and that there is no return electrode. Dr. Taylor agreed that both electrodes are intended to cause a tissue effect. (Tr. 1396). Dr. Taylor also testified that the two electrodes work to form a "toroid," or donut-shaped, treatment region between the electrodes. (Tr. 1398-99). This testimony demonstrates that both electrodes are active, because under the Court's claim construction, an active electrode is "a stimulating electrode. . . applied to tissue for stimulation." (D.I. 353 at 3). In addition, Dr. Taylor was impeached at trial with his deposition testimony in which he agreed that all of the electrodes in each embodiment of the Doss '007

patent had substantially the same current density.[11] (Tr. 1385). Thus, the Doss '007 patent does not disclose a return electrode because the Court's claim construction requires a return electrode to have a "lower current density" than the active electrode.

2. The Jury's Verdict That Neither The Roos And Elsässer Article Nor The Roos '198 Patent (the "Roos References") Anticipates The '536 Patent Should Not Be Disturbed.

The jury's determination that Smith & Nephew failed to meet its burden of proving invalidity is substantially supported by the fact that the Roos references were disclosed to the PTO during the reexamination of the '536 patent. (Tr.1336-38, PX 7). A board of three examiners reviewed the patentability of the asserted claims of the '536 patent in light of the Roos references during the reexamination and concluded that they did not render any of the claims unpatentable. (Tr. 1337-38). The PTO issued a Notice of Intent to Issue Reexamination Certificate on March 14, 2003. (Tr. 1538-40). Thus, the jury's determination that Smith & Nephew failed to meet its burden as to the Roos references must be viewed in light of the fact that Smith & Nephew's burden in proving anticipation was "more difficult" to meet.

As with the Doss '007 patent, Smith & Nephew failed to show that there is a connector near the proximal end of the shafts of the devices disclosed in the Roos references that connects the electrode terminal to the generator, as required by claims 46, 47 and 56 of the '536 patent. Dr. Taylor admitted that there is no disclosure of the location of a connector anywhere in the Roos '198 patent. (Tr. 1371-72). As for the Roos and Elsässer article, Dr. Taylor identified no disclosure in the article which described the function of the structure at the proximal end of the device which he contended was a connector. (Tr. 1298). The jury was free to disregard his testimony as insufficient to show a connector for "electrically coupling the electrode terminal to

[11] Although Dr. Taylor tried to explain away his deposition testimony as a mistake, the jury was free to reject his trial testimony. (Tr. 1385-86).

the electrosurgical power supply," especially since Dr. Taylor had used the word "connector" to describe a structure that connected the device in the Pao '499 patent to a fluid supply. (Tr. 1311). In light of this lack of evidence of a connector, Smith & Nephew cites to several passages in the Roos references in a misguided attempt to show that a connector is inherent. The first passage Smith & Nephew quotes (D.I. 459 at 30) is from the '198 patent and discusses a cable leading to the return electrode, not a connector for electrically coupling the active electrode, as required by the asserted claims. The second passage Smith & Nephew cites, also from the '198 patent, discusses only an "insulated cable means," which is a conductor, not a connector, and in any event does not disclose its location with respect to the proximal end. (*Id.*) Finally, Smith & Nephew points to figure 9 in the Roos and Elsässer article as evidence of a connector. (D.I. 459 at 30). Figure 9, however, does not disclose what the structure at the proximal end actually does, such as whether it connects the active electrode, the return electrode, or a fluid supply, or has some other function altogether.

Dr. Taylor's testimony also did not establish that a connector near the proximal end of the shaft for coupling the electrode terminal to the generator is inherently disclosed in either of the Roos references. As Smith & Nephew points out, Dr. Taylor testified that "you do realize that all resectoscopes have connectors at the back of the resectoscope." (Tr. 1371). This testimony, however, was properly rejected by the jury because it lacked any basis, was conclusory, was not corroborated with any documents, and does not specify what the "connector" couples together. Similarly, Dr. Taylor's testimony that "there are no resectoscopes on the market that don't have a connector at the end, on the back of the resectoscope" (Tr. 1372) is insufficient because the mere fact that devices on the market today may have connectors does not establish (a) that the connector is one that connects the electrode terminal to the generator, or (b) that a connector is inherent in the Roos references that were published over 20 years ago. *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002) ("inherent anticipation requires that the missing

descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art").

Dr. Taylor's admissions also clearly establish that the Roos references do not disclose the use of an electrically conducting fluid. Dr. Taylor testified that the Roos references do not disclose the use of either saline or Ringer's lactate. (Tr. 1340-43, 1375). He also testified that the Roos references describe the use of prior art monopolar devices for TURP procedures, in addition to the bipolar devices Smith & Nephew alleges anticipate. (Tr. 1340-42, 1374-75). As Dr. Taylor testified, the liquid used in these prior art monopolar devices for TURP procedures was electrically non-conducting. (*Id.*). This is significant because Dr. Taylor conceded that the Roos references do not differentiate between the liquid used with the bipolar devices and the liquid used with the monopolar devices. (Tr. 1343-44 ("washing water" and "washing liquid"), 1376-77 ("irrigation liquid"), 1350-51). From this, the jury was free to conclude that the liquid described in the Roos references was not electrically conducting fluid.

In addition, Dr. Taylor's testimony as to Figure 5 of the Roos '198 patent establishes that the fluid it mentioned was not electrically conducting. Dr. Taylor agreed that if the liquid disclosed in Figure 5 of the Roos '198 patent were electrically conducting, there would be no need for the steel band described in Figure 5 to rest "on the tissue in large area form so that good electrical contact is ensured," as described in the '198 patent (Tr. 1345). Because Dr. Taylor testified that the same fluid is used for all of the embodiments of the '198 patent, there can be no doubt that the fluid disclosed in the '198 patent was not electrically conducting. (Tr. 1343-44, 1350-51, 1376-77).

Dr. Taylor's testimony concerning a later issued patent to Roos, the '667 patent, also shows that the fluid mentioned in the '198 patent was not electrically conducting. Specifically, Dr. Taylor agreed that if the fluid used in '198 patent had been an electrically conducting fluid, then the subsequent '667 patent would not have stated, as it did, that the device in the '198 patent did not work. (Tr. 1364-66). Moreover, Dr. Taylor conceded that if the device disclosed in the

'198 patent had used electrically conducting fluid, then the '667 patent would not have described the return electrode of the '198 patent as only being able to "enter into electrical contact with the cutting electrode electrolytically via the secretion which is present during the cutting process." (Tr. 1366). In light of Dr. Taylor's admissions, the jury was free to conclude that Smith & Nephew did not meet its burden of proving that the Roos '198 patent anticipated the asserted claims of the '536 patent.

Smith & Nephew makes much of the fact that claim 1 of the '198 patent refers to "liquid to provide electrical conductance."[12] (D.I. 459 at 32). This statement, however, begs the question rather than answering it. Dr. Taylor readily conceded that even non-conducting fluids will conduct electrical current. (Tr. 1373-75). This testimony is consistent with Figure 3 of the Roos and Elsässer article, which clearly shows current flux lines passing from the treatment electrode to the endoscope shaft through electrically non-conducting fluid. (*Id.*, DTX 594A). From this, the jury was free to conclude that simply because a fluid will conduct some amount of current does not make it an electrically conducting fluid, and thus that Smith & Nephew failed to show anticipation by clear and convincing evidence with the Roos references.

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12 Smith & Nephew also cites to the Roos and Elsässer article, which states that "[the device] offer[s] the high-frequency current a path to balance the potential difference that would be so short and offer such a low resistance that aberrant currents or leakage do not even occur." (D.I. 459 at 32). Smith & Nephew did not argue at trial that this portion of the Roos article discloses an electrically conducting fluid, nor could it have, because this portion of the article is not referring to the conductive qualities of the fluid. Instead, it is referring to the relatively lower resistance between the electrodes in the bipolar, as opposed to monopolar, configurations that results from the shorter distance between electrodes in a bipolar device (both electrodes are positioned close together in the vicinity of the surgical site) than in a monopolar device (the return electrode is positioned away from the surgical site outside the patient's body).

C. A Reasonable Jury Could Conclude That Smith & Nephew Failed To Meet Its Burden Of Proving That The '882 Patent Is Invalid.

1. The Manwaring '138 Patent Does Not Anticipate Claims 13 and 54 Of The '882 Patent.

The Manwaring '138 patent does not disclose the vaporization of electrically conducting fluid followed by electrical discharge, which is required by claims 13 and 54 of the '882 patent.[13] On cross examination, Dr. Manwaring admitted that his patent disclosed the opposite method: a spark discharge first, and then the vaporization of the fluid second. (Tr. 907-908). Smith & Nephew simply ignores this testimony, which undercut its anticipation defense.

Claim 13 of the '882 patent also requires the generation of photons having a wavelength in the ultraviolet ("UV") spectrum. The Manwaring '138 patent never mentions UV photons, and the jury was free to reject the conclusory testimony of Drs. Taylor and Manwaring that UV photons were inherently present in the device disclosed in the Manwaring '138 patent. Neither Dr. Taylor nor Dr. Manwaring performed any tests, analyzed any data, or offered any corroboration in scientific literature for their testimony. (Tr. 897-915, 1420-21, 1430).[14] As such, the jury was free to reject their testimony.

The Manwaring '138 patent also does not disclose evacuating fluid generated at the target site as required by claim 54. Instead, as Dr. Manwaring and Dr. Taylor both admitted, the Manwaring '138 patent only discloses drawing the fluid into the catheter tip where it remains in the vicinity of the tissue – not evacuating fluid beyond the vicinity of the target site. (Tr. 904-05, 1432-33). Contrary to Smith & Nephew's allegations, ArthroCare never argued that all of the

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[13] Asserted claims 13 and 54 depend from claim 1.

[14] Dr. Taylor testified that the presence of "a spark in an aqueous solution" would generate UV photons because that is "college chemistry." (Tr. 1420). Dr. Taylor, however, could produce no college chemistry textbook, or any other material, that supported this proposition.

fluid must be evacuated from the target site. (D.I. 459 at 40). Rather, ArthroCare pointed out, as the reference plainly shows, that the fluid is drawn into the device tip but is not removed from vicinity of the target site. This is not the claimed evacuation.

2. The Slager Reference Does Not Anticipate Any Asserted Claim Of The '882 Patent.

There was no evidence that the Slager reference discloses the application of energy to a "target site on a patient body structure," as required by claims 13, 17 and 54 of the '882 patent. Dr. Taylor agreed that the Slager reference discloses only the application of energy to a tissue sample in a lab dish, not to a patient body structure. (Tr. 1426-27). Significantly, Smith & Nephew argued both in its opening and closing arguments that it had not directly infringed the '882 patent because it had not performed "surgeries" on patients with the accused devices. (Tr. 190-91, 1651).[15] Thus, Smith & Nephew cannot argue that the disclosure of the application of energy to tissue samples in a lab dish anticipates claims requiring the application of energy to a target site on patient's body. It is axiomatic that, for a method claim, "that which infringes if later anticipates if earlier." *Schumer v. Laboratory Computer Sys., Inc.*, 308 F.3d 1304, 1309 (Fed. Cir. 2002).

The fact that Mr. Eggers may have reduced the inventions to practice on tissue samples in bowls of saline is of no significance to whether Smith & Nephew met its burden. To the contrary, the purpose and efficacy of some inventions are "so obvious that their complete construction is sufficient to demonstrate workability, even though it does not perform all of the claim limitations." *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1575, 1578 (Fed. Cir. 1996) (finding that testing in inventor's kitchen sink of an invention that ultimately included a claim limitation of preventing "traumatizing or becoming caught in the walls of a vessel into which the catheter is

[15] In light of this argument, Smith & Nephew cannot be heard to argue now, as it does, that the preamble "does not constitute a claim limitation." (D.I. 459 at 37).

inserted" was sufficient actual reduction to practice, even though all of the limitations ultimately claimed were not met during the testing). Thus, the circumstances of Mr. Egger's reduction to practice do not change the fact that the Slager reference cannot anticipate because it does not disclose the application of energy to a "patient body."

As with the Manwaring '138 patent, the jury was entitled to find that Smith & Nephew failed to show that the UV photon limitation of claim 13 of the '882 patent is met by the Slager reference. Smith & Nephew relied exclusively on the cursory testimony of its expert, which the jury was entitled to disregard. (Tr. 1319). As such, the jury's verdict that the Slager reference does not anticipate must stand.

Smith & Nephew also failed to show that the Slager reference meets the limitations of claim 54, which require "a suction lumen having a distal end adjacent the electrode terminal." Dr. Taylor readily admitted that the Slager reference fails to disclose the location of a suction lumen. (Tr. 1425-26). From this, the jury reasonably could conclude that Smith & Nephew failed to show that the Slager reference anticipates claim 54 of the '882 patent.

3. The Jury Was Entitled To Conclude That Smith & Nephew Had Not Met Its Burden On Enablement.

To show enablement, Smith & Nephew was required to prove that one skilled in the art would not be able to make and use the claimed invention without undue experimentation. *Genetech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997). As with anticipation, Smith & Nephew bore the burden of showing lack of enablement by clear and convincing evidence. *Morton Int'l v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470 (Fed. Cir. 1993).

Smith & Nephew's total evidence in support of its enablement defense is the following testimony from Dr. Taylor:

> Q. Do you have any other basis for believing that the claims of the '882 patent are invalid?
>
> A. I am sorry, I am blanking on this.

Q. Sure.

A. When you say other opinions, do you mean other facts?

Q. Do you understand that ArthroCare contends that what is taught in the '882 patent is a new phenomenon?

A. I see what you mean. No, it is not a new phenomenon. It's been anticipated, it's been described in the prior art.

Q. If, in fact, it is a new phenomenon, do you believe there is an additional basis for the '882 patent to be found invalid?

A. Yes. One of the concerns I have – I think I expressed this yesterday – is that if the '882 patent is found to be invalid, then a large number of the devices that I have developed and, for that matter, a large number of the devices that have been developed in electrosurgery will infringe, because of the fact that what they are claiming is extremely broad.

Q. Does the '882 patent teach anything about how to achieve a new phenomenon that is different than the principle of operation of conventional electrosurgical devices?

A. No, it doesn't. I was perplexed and, frankly, am still perplexed about the overall phenomenon of Coblation.

Q. And is that defense also sometimes called nonenablement?

A. Yes, it is.

Q. Do you have an opinion as to whether the claims of the '882 patent are enabled to the extent it claims a new phenomenon?

A. Yes, I have an opinion.

Q. What is that opinion?

A. That it is not.

Q. Thank you.

(Tr. 1323-25). The jury was entitled to reject this testimony. Dr. Taylor obviously was led to his opinion by counsel after "blanking on this," and provided no basis for it in any event. Moreover, there was no basis for Smith & Nephew's expert to equate "Coblation" with the claims of the '882 patent. The rejection of this testimony as utterly lacking in credibility falls squarely within the prerogative of the jury.

In addition, the Court instructed the jury that in determining enablement it must consider whether "undue experimentation" is required. (Tr. 1731). Smith & Nephew, however, presented no evidence whatsoever that one of ordinary skill in the art would require undue experimentation to make and use the invention.

The table on page 43 of Smith & Nephew's brief proves nothing, since it omits several critical elements disclosed in the specification of the '882 patent, such as voltage, power, distance between the active and the return, fluid density, and the presence of asperities on the electrodes. (JTX 2). Smith & Nephew's enablement argument also fails because Dr. Taylor testified that one of skill in the art would follow the preferred teachings in the specification, and there is no evidence that one following the preferred teaching would not have been able to make and use the inventions without undue experimentation. (Tr. 1434-38).

D. A Reasonable Jury Could Conclude That Smith & Nephew Failed To Meet Its Burden Of Proving That The '592 Patent Is Invalid.

The Doss '007 patent, discussed above with respect to the '536 patent, does not disclose a return electrode. As such, it does not anticipate any of the asserted claims of the '592 patent. Moreover, the Doss '007 patent does not disclose a voltage in the range of 500 to 1,400 volts peak-to-peak as required by claims 21 and 42 of the '592 patent, but only 20 to 200 volts RMS (root-mean-square). As Dr. Taylor conceded, the Doss '007 patent does not disclose the waveform of the voltage, and if the waveform were square, then the peak-to-peak voltage in Doss '007 patent would be only 400, and not within the required range of 500 to 1,400. (Tr. 1402-04). Dr. Taylor simply presumed that the Doss '007 patent refers to a sine wave. *Id.* There was no basis for such a presumption. Indeed, the Slager reference relied on by Smith & Nephew discloses a *square* wave generator. (DTX 65 at SN11303). Dr. Taylor's assertion of a lack of awareness of a "commercially available square wave generator" does not establish the inherency of a sine wave in the Doss '007 patent. To the contrary, no matter what may have been

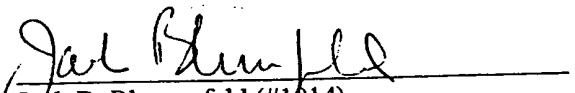
"commercially available," the disclosure of a square wave generator in the Slager reference proves that the waveform in the Doss '007 patent was not necessarily a sine wave. As such, the Doss '007 Patent does not anticipate the asserted claims of the '592 patent.

The Slager reference also does not anticipate the asserted claims of the '592 patent. As an initial matter, there is no disclosure of the application of energy to a body structure of a patient, which is required by all of the asserted claims. Moreover, the Slager reference does not disclose the location of the return electrode, and thus does not disclose the "not in contact/spaced away" limitations of the asserted claims of the '592 patent. Dr. Taylor testified that he could not determine the location of the return electrode in the Slager reference. (Tr. 1414-18). Thus, the jury was free to conclude, as it did, that the Slager reference did not meet the "not in contact/spaced away" limitations of the '592 patent by clear and convincing evidence.

CONCLUSION

For the reasons set forth herein, Smith & Nephew's Rule 50(b) motion for judgment as a matter of law should be denied in its entirety.

MORRIS, NICHOLS, ARSHT & TUNNELL



Jack B. Blumenfeld (#1014)
Karen Jacobs Louden (#2881)
James W. Parrett, Jr. (#4292)
1201 N. Market Street
P.O. Box 1347
Wilmington, DE 19899
(302) 658-9200
Attorneys for Plaintiff ArthroCare Corporation

OF COUNSEL:

Matthew D. Powers
Jared Bobrow
Perry Clark
WEIL, GOTSHAL & MANGES LLP
Silicon Valley Office
201 Redwood Shores Parkway
Redwood Shores, CA 94065
(650) 802-3000

Timothy E. DeMasi
WEIL, GOTSHAL & MANGES LLP
767 Fifth Avenue
New York, NY 10153
(212) 310-8000

July 30, 2003

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	
SMITH & NEPHEW, INC., Counterclaim Plaintiff, v. ARTHROCARE CORPORATION, AND ETHICON, INC., Counterclaim Defendants.	C.A. No. 01-504-SLR

SMITH & NEPHEW'S REPLY BRIEF IN SUPPORT OF ITS RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW

Dated: August 14, 2003

FISH & RICHARDSON P.C.
William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
Eugene B. Joswick (#4271)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Kurtis D. MacFerrin
Karen L. Boyd
500 Arguello Street, Suite 500
Redwood City, CA 94063
Telephone: (650) 839-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

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STATUTES AND OTHER AUTHORITIES

I. INTRODUCTION

ArthroCare's Answering Brief fails to rebut Smith & Nephew's showing that JMOL should be entered in its favor on the following issues:

- the '882 certificate of correction is invalid;
- the accused products do not infringe any of the patents-in-suit;
- Smith & Nephew does not contribute to or induce infringement of the patents-in-suit;
- Smith & Nephew does not infringe under the doctrine of equivalents, non-suction Saphyre probes do not infringe claim 54 of the '882 patent, and Smith & Nephew does not directly infringe the '882 or '592 patents;
- the claims of the patents-in-suit are anticipated by various references; and
- the claims of the '882 patent are not enabled.

The evidence at trial, including the testimony of ArthroCare's own witnesses, supports Smith & Nephew's position on these issues. Further, since filing its Opening Brief, Smith & Nephew has learned that the PTO has granted its requests for reexamination of the patents-in-suit. These reexamination requests were based on virtually the same invalidity evidence that Smith & Nephew presented at trial, thus confirming that the jury was misled and that its verdict is incorrect. Thus, the Court should grant JMOL in favor of Smith & Nephew on these issues.

II. ARGUMENT

A. The Accused Products Do Not Infringe the Asserted Claims

1. The Accused Products Do Not Infringe the '882 Patent

ArthroCare has failed to overcome Smith & Nephew's showing that the certificate of correction which broadened claim 1 of the '882 patent was invalid, and thus, that there was no infringement of the '882 patent.[1] Smith & Nephew's Opening JMOL brief showed that the

[1] As set forth in our New Trial Motion, Smith & Nephew continues to maintain that the validity of the certificate of correction is an issue of law for the Court, and not for the jury (D.I. 456 at 27-30). This was also Smith & Nephew's position before trial (D.I. 246 at 35-37). ArthroCare itself also argued that it was an issue of law for the Court (D.I. 335 at 157) However, since the Court submitted the issue to the jury, Smith & Nephew has also shown that the certificate is invalid considering the evidence adduced at trial.

certificate of correction was invalid by the clear and convincing evidence introduced at trial, including the testimony of Dr. Goldberg, Mr. Raffle, and the '882 prosecution history (D.I. 459 at 14-19), under *Superior Fireplace Co. v. Majestic Prods. Co.*, 270 F.3d 1358 (Fed. Cir. 2001). Under *Superior Fireplace*, a broadening certificate of correction is only valid "where it is ***clearly evident*** from the specification, drawings, and prosecution history how the error should appropriately be corrected." *Id.* at 1372.[2] No reasonable juror could determine that the corrections made in the '882 certificate were "clearly evident" based on that record, particularly since the specification (*e.g.*, JTX-2 at cols. 3-5, 7-9, 11-12, 15, 20-23), drawings (*e.g.*, Figs. 15, 17, 19-22), and prosecution history (*e.g.*, amendment to claim 52 (DTX-306 at 204-05) and examiner's statement (DTX-306 at 222)) all supported the use of the term "active electrode" in claim 1 of the uncorrected '882 patent.[3]

ArthroCare complains that Smith & Nephew failed to introduce "expert testimony" about the certificate. (D.I. 467 at 18). But ArthroCare has not cited any case that suggests that this is a matter for expert testimony, and we are aware of none. Certainly there was no such expert testimony in *Superior Fireplace*—in fact, the district court expressly ***disavowed*** the use of any extrinsic evidence beyond the patent file itself. *Superior Fireplace Co. v. Majestic Prods. Co.*, 92 F.Supp.2d 1001, 1008-9 (C.D. Cal. 2000), *aff'd in relevant part*, 270 F.3d 1358 (Fed. Cir. 2001).

ArthroCare also argues that the trial testimony of Mr. Raffle, the patent's prosecutor, about his intent was sufficient to uphold the validity of the certificate. (D.I. 467 at 19). But *Superior Fireplace* clearly says that such intent is not relevant. *Id.* at 1375. Thus, no reasonable juror could have properly relied on Mr. Raffle's testimony about his intent. ArthroCare also points out that Mr. Raffle testified that there was an incorrect antecedent basis in the uncorrected claim. (D.I. 467 at 19). But the Federal Circuit explained in *Superior Fireplace* that an

[2] Emphasis added here and throughout, unless otherwise noted.

[3] Smith & Nephew also introduced the pre-litigation report of Mr. Heim (PX-75), who was one of skill in the art (D.I. 414 at 933-34), which shows that the use of the term "active electrode" in claim 1 of the '882 patent was not a "clearly evident" error. (*See* PX-75 at 24-25). *See Wilburn v. Maritrans GP Inc.*, 139 F.3d 350, 356 (3d Cir. 1998) (holding that a lay witness can offer opinion testimony if the witness possesses sufficient and relevant knowledge or experience).

antecedent error merely indicates that one of the limitations includes a mistake, but "does not indicate which is mistaken." *Id.* at 1362, 1373. And other than Mr. Raffle's irrelevant testimony, ArthroCare offered no other evidence to rebut the evidence offered by Smith & Nephew.[4]

Thus, JMOL should be entered that the '882 certificate of correction which broadened claim 1 is invalid, and that there is no infringement of the '882 patent.

2. The Accused Products Do Not Infringe the '536 Patent

ArthroCare has also failed to rebut Smith & Nephew's showing that it should be granted JMOL that the accused products do not infringe the asserted claims of the '536 patent. As shown in Smith & Nephew's Opening Brief, ArthroCare introduced ***no*** evidence that the accused probes are part of an "electrosurgical system" as construed by the Court: "an assemblage or combination of things or parts ***forming a unitary whole,***" which includes "an electrically conducting fluid supply." (D.I. 459 at 6-10).[5] ArthroCare has not shown otherwise, and, in fact, the evidence ArthroCare cites in its opposition actually proves that Smith & Nephew does not infringe.

As described in the '536 patent, the integral fluid supply is included as part of the "unitary whole" system so that the invention can be used in open surgical procedures. The patent explicitly describes the invention as one for performing electrosurgery "***without*** requiring the tissue ***to be submerged*** in an electrically conducting irrigant, such as isotonic saline." (JTX-1 at col.3, lines 12-18). Thus, the patent says the invention is "particularly effective in dry environments (*i.e.*, the tissue ***is not submerged in fluid***)." (*Id.* at col. 3, lines 37-41). Yet, despite the patent's clear disavowal of submerging the device in fluid, the only evidence ArthroCare

[4] None of ArthroCare's other arguments has any merit. *E.g.*, ArthroCare argues that Mr. Raffle was not motivated to sue Ethicon since he did not amend claim 26. (D.I. 467 at 20). But in our Reply Brief on the inequitable conduct issue, we showed that ArthroCare did not need to amend claim 26 to sue Ethicon. (D.I. 464 at 12-13). ArthroCare also tries to distinguish a portion of *Superior Fireplace* by arguing that there was no reason to respond to the examiner's statement of reasons for allowance since the claims had been allowed. (D.I. 467 at 20). But that argument makes no sense, since the claims in *Superior Fireplace* were also allowed at the same time that the examiner issued his amendment which contained the alleged error. 270 F.3d at 1363.

[5] Contrary to ArthroCare's argument (D.I. 467 at 7-8), Smith & Nephew did not argue that there had to be a fluid path within the probe, although that certainly would be one way to have a "unitary whole" system that included a fluid supply.

points to is evidence that the Smith & Nephew devices work when submerged in fluid, *e.g.*, "the tissue was shown completely submerged under saline." (D.I. 467 at 11). Indeed, ArthroCare concedes that the accused probes are ***contraindicated*** for any procedure other than arthroscopy, in which the device will necessarily be ***submerged*** in fluid. (D.I. 467 at 11, 21).

Further, when the accused devices are used, the fluid is supplied to the joint by a wholly separate means, such as an IV bag or a separate system like the IntelliJet system. Such separate fluid supply is not integral with or otherwise part of a "unitary whole" with the probe, but rather is a standard fluid supply used in all arthroscopic surgeries. Thus, ArthroCare's evidence that the accused devices will only work when submerged in conductive fluid—which is supplied by a completely separate means such as an IV bag—falls far short of proving that they are part of a "unitary whole" electrosurgical system that includes a conductive fluid supply.[6]

ArthroCare also argues that claim differentiation between claims 1 and 45 shows that claim 45 does not require that the fluid travel through a fluid path within the probe. (D.I. 467 at 8 n.1). However, "[w]hether or not claims differ from each other, one can not interpret a claim to be broader than what is contained in the specification and claims as filed." *Tandon Corp. v. U.S. Int'l Trade Comm'n*, 831 F.2d 1017, 1024 (Fed. Cir. 1987). As the Court in *Tandon* held:

> [P]ractice has long recognized that "claims may be multiplied ... to define the metes and bounds of the invention in a variety of different ways." Thus two claims which read differently can cover the same subject matter.

Id. at 1023 (citing *Bourns, Inc. v. United States*, 537 F.2d 486, 492 (Ct. Cl. 1976)) (internal citation omitted).[7] Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case that the accused products are not part of an "electrosurgical system" which includes a "fluid supply" as construed by this Court. Therefore, the Court should grant JMOL of no infringement.

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[6] ArthroCare's argument that Dr. Taylor described the *in vitro* experiment in the Slager Article as an electrosurgical system is inapposite. First, Dr. Taylor asserted the Slager Article only against the '882 and '592 patents, neither of which claim an "electrosurgical system" like the '536 patent. Further, while Slager might describe a type of system, Dr. Taylor never said that it was an "electrosurgical system" as that term was construed by the Court.

[7] In any event, claims 1 and 45 clearly have a different scope. *E.g.*, claim 45 includes a power supply; whereas, claim 1 does not.

3. The Accused Products Do Not Infringe the '592 Patent

ArthroCare has also failed to rebut Smith & Nephew's showing that it should be granted JMOL that the accused products do not infringe the asserted claims of the '592 patent. As shown in Smith & Nephew's Opening Brief, ArthroCare's evidence was based on the claim construction that ArthroCare proposed in its summary judgment briefs—which the Court rejected.[8] (D.I. 459 at 10-13). But ArthroCare introduced ***no*** evidence of infringement under the Court's claim construction: "the return electrode is not to contact the body ***at all during the performance of the claimed method***" (D.I. 353 at 2) (emphasis in original).

The evidence at trial showed that the return electrodes of the accused products touch the body structure on a nearly continuous basis during use. ArthroCare does not dispute this. Instead, it defends the jury's verdict by arguing that "there are times" when the return electrode does not contact tissue. (D.I. 467 at 12-14). However, ArthroCare improperly focuses on only a portion of one claim step, while ignoring the others. In doing so, ArthroCare has failed to show that the return electrode is not in contact with the body "***at all during the performance of the claimed method***" as the Court's construction requires. Instead, ArthroCare twists the Court's ruling that the claimed method does not contain any time limitations and argues that if during the applying energy step of the method the return electrode does not touch for a split second, there is infringement. ArthroCare's argument makes no sense—it takes the words "***at all***" out of the Court's claim construction—and is wrong.

First, as pointed out in Smith & Nephew's Opening Brief (D.I. 459 at 11-12), ArthroCare's argument completely ignores the first step of the claimed method: "positioning an electrode terminal into at least close proximity with the target site in the presence of an electrically conductive fluid." (JTX-3 at claim 1; *see also* claim 23). As was seen in the various sales-training videos shown during trial, during the portions of the procedure that the energy was not being applied, the first step of the claimed method was being practiced—the probe was being

[8] The Court rejected ArthroCare's claim construction in its Memorandum Opinion of April 9, 2003 (D.I. 353 at 6-7), and ArthroCare's argument that it did not propose a claim construction for the Court to reject (D.I. 467 at 14, n.5) is incorrect.

positioned—and the return electrode often touched the tissue during that positioning step. (DTX-315, 316). The positioning step is also part of the claimed method, and ArthroCare cannot ignore it.

Second, ArthroCare cannot take a split second out of the claimed method and ignore the rest of the time the method is being performed. While the Court did rule that there was no time limitation to the method, it also instructed the jury that "the claimed method is performed when each of the three steps of the claim has been ***completed***." (D.I. 418 at 1718). Thus, as pointed out in our Opening Brief (D.I. 459 at 12-13), the method is not "completed" until the energy is turned off. At that point, the method starts over again by the surgeon "positioning [the] electrode terminal into at least close proximity with the target site." So, contrary to ArthroCare's argument (D.I. 467 at 16), if the return touches the tissue while the energy is on, there can be no infringement even if there had been no contact for the first 3 seconds. This is not a time limitation as ArthroCare asserts, but rather follows the Court's construction that "the claimed method is performed when each of the three steps of the claim has been ***completed***."

ArthroCare's argument that the design of the probes somehow proves that the return does not touch tissue (D.I. 467 at 17) is also wrong. First, this argument is inconsistent with its argument that Smith & Nephew warns surgeons to avoid return electrode contact. (*Id.* at 13). If the probes were designed so the return would not contact tissue, why would Smith & Nephew need to warn surgeons to avoid contact?[9] Further, the evidence demonstrates that the probes were not designed to avoid return electrode contact. For example, Kate Knudsen testified that the Saphyre was designed to have the return electrode as close as possible to the active electrode so that the return would be in the surgeon's view to monitor the return electrode contact with tissue. (D.I. 414 at 963-64). This is confirmed by the Instructions for Use ("IFU") for the Saphyre, which only warn to avoid contact with "non-targeted tissue" (PX-381), since contact with target

[9] In any event, ArthroCare has no persuasive evidence that Smith & Nephew actually warns doctors in this way. All ArthroCare's "evidence" shows is how to hold the Saphyre to ensure optimal bubble evacuation (PX 324 at ORA 65090), and to make sure enough fluid is present around the ElectroBlade and Control RF to ensure that the return does not cause a tissue effect when it touches (D.I. 415 at 1023-25).

tissue was expected. Similarly, Karen Drucker testified that the ElectroBlade was designed with a large return since they "knew that the return would, in fact, contact tissue." (D.I. 415 at 1024).

Dr. Goldberg's testimony also corroborates the fact that the probes were not designed to avoid contact with tissue. For example, Dr. Goldberg testified "very clearly there is occasional contact frequently ..." (D.I. 411 at 423). Dr. Goldberg then goes on to contradict himself with the claim that the "probe is designed to enable [there] not being contact." (*Id.*). Clearly, if there is "contact frequently," the probes were not designed to avoid contact. Also, Dr. Goldberg tried to make much of the fact that the return electrodes of the Saphyre and Control RF are on a different plane, below the active electrode. (D.I. 411 at 397 and 424). However, if this is evidence of no contact, then the ElectroBlade return must contact tissue because the return is on a plane spaced ***above*** the active electrode. (PX-113-A; PX-335). Finally, if the probes were designed to avoid contact, ArthroCare would not have to rely on still images from the sales training videos (D.I. 467 at 16, n.6), but rather could have easily shown no contact while the videos were playing.

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case that the return electrode of the accused products contacts tissue during performance of the claimed method as construed by the Court, and the Court should grant JMOL of no infringement.

4. No Contributory Infringement or Inducement

ArthroCare has also failed to prove that Smith & Nephew contributorily infringes or induces infringement. ArthroCare focuses on its alleged copying theory and its contention that the accused products were designed to infringe. (D.I. 467 at 21, 25). Both arguments must fail.

First, as discussed in our New Trial Brief (D.I. 456 at 17-24), ArthroCare's focus on its alleged copying case was prejudicial to Smith & Nephew. Since the trial is bifurcated, Smith & Nephew could not rebut ArthroCare's "evidence" to show no copying occurred. Further, Smith & Nephew's awareness of ArthroCare's patents and its review of ArthroCare's devices alone do not prove that the devices were copied or designed to infringe. *See, e.g., State Indus., Inc. v. A.O. Smith Corp.*, 751 F.2d 1226, 1235-36 (Fed. Cir. 1985) ("Conduct such as [defendant's], involving

keeping track of a competitor's products and designing new and possibly better or cheaper functional equivalents is the stuff of which competition is made ..."); *see also Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 1435 (Fed. Cir. 1988) ("[T]he incentive to design around a patent is a positive result of the patent system."). Thus, none of ArthroCare's evidence proves that Smith & Nephew intended to infringe, and there can be no inducement.

Also, as discussed above, the accused products cannot be designed to infringe because they are contraindicated for any use outside arthroscopy. The patents-in-suit are specifically directed to devices that can be used in a dry environment; *i.e.*, outside arthroscopy. (*See, e.g.*, JTX-1 at col. 3, lines 26-30). Since the products cannot be used outside arthroscopy, they cannot be designed to infringe. ArthroCare's argument that since electrically conducting fluid is present in arthroscopy it must infringe is clearly misleading. Similarly, as discussed above, the return electrodes were not designed to not contact tissue (D.I. 414 at 963-64, D.I. 415 at 1024; PX-113-A; PX-335), but rather to allow tissue contact with minimal effect. Since the return electrodes were designed to allow contact, they could not have been designed to infringe.

Moreover, since the accused products work when the return electrodes touch tissue, they have substantial non-infringing uses. Indeed, taking Mr. Bobrow's example from his closing argument, where for three seconds the return electrode is not in contact and then for one second it is (D.I. 417 at 1580), would mean that the device was not infringing—even under ArthroCare's rejected claim construction (discussed above)—25% of the time. Such a non-infringing use is clearly substantial, and not "occasional and aberrant" as ArthroCare suggests. (D.I. 467 at 22).

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* showing of no contributory infringement and no inducement, and the Court should grant JMOL on this issue.

5. Infringement Issues ArthroCare Failed to Prove at Trial

ArthroCare's Opposition does not substantively challenge Smith & Nephew's right to JMOL under Fed. R. Civ. P. 50(b)(2)(B) that: (1) there is no infringement under the doctrine of equivalents, (2) the non-suction Saphyre probes do not infringe claim 54 of the '882 patent and (3) Smith & Nephew does not directly infringe the '882 and '592 patents. ArthroCare's

procedural argument that these issues cannot be resolved by JMOL (D.I. 467 at 6) is refuted by the clear language of the rule itself. Rule 50(b)(2)(B) specifically states that "the court may[,] if no verdict was returned[,] ... direct entry of judgment as a matter of law." No verdict was returned on these issues because ArthroCare, although it raised the issues before trial, failed to present any evidence to support its accusations. ArthroCare should be precluded from raising these issues in the future, and the Court should enter JMOL for Smith & Nephew's on these issues.

B. The Patents-In-Suit Are Invalid

1. Smith & Nephew's Rights Under Rule 50 Were Preserved

Contrary to ArthroCare's arguments (D.I. 467 at 26), the Court clearly preserved Smith & Nephew's rights under Fed. R. Civ. P. 50(a). The Court can preserve the parties' rights and submit the matter to the jury without requiring a detailed Rule 50(a) motion and without affecting the parties' rights under Rule 50(b). *Motorola, Inc. v. Interdigital Tech. Corp.*, 930 F. Supp. 952, 961 (D. Del. 1996) *rev'd in part on other grounds* 121 F.3d 1461 (Fed. Cir. 1997); *see also Wilson Sporting Goods v. David Geoffrey & Assocs.*, 904 F.2d 677, 683 (Fed.Cir.1990) *overruled in part on other grounds by Cardinal Chem. Co. v. Morton Int'l*, 508 U.S. 83 (1993); *Laborers' Pension Fund v. A&C Environ., Inc.*, 301 F.3d 768, 776-77 (7th Cir. 2002).

Here, when Smith & Nephew moved for JMOL during trial, the Court indicated that it was not interested in a detailed argument, instructing the parties that all of their rights were reserved. Smith & Nephew first moved for JMOL at the close of ArthroCare's evidence. (D.I. 415 at 1161). Smith & Nephew then renewed its motion at the close of all the evidence, to which the Court replied "***All*** such motions are reserved." (D.I. 417 at 1549). Then, just prior to the jury charge, Smith & Nephew again renewed its motion. (D.I. 418 at 1700). In response, the Court said, "***All*** your rights are reserved and my decisions are reserved as well." (*Id.*).

As can be seen from these exchanges, the Court cut-off any further discussion and explicitly reserved ***all*** of both parties' rights as to JMOL motions. This is identical to what happened in *Motorola*, in which the movant made a barebones motion under Rule 50(a):

> The Court made clear that it did not require or desire additional argument at the time the motion was made, and it would be unfair to penalize ITC for acceding to the Court's wishes. The Court will rule on ITC's JMOL motion.

930 F. Supp. at 961; *see also Wilson Sporting Goods Co.*, 904 F.2d at 683. Thus, Smith & Nephew's rights under Rule 50 were properly preserved.[10]

Moreover, ArthroCare has failed to show any prejudice from any lack of a more detailed Rule 50(a) motion, or that the spirit of the rule has been offended.[11] The purpose of Rule 50(a) is the "avoidance of surprises and tactical victories at the expense of substantive interests." *Acosta v. Honda Motor Co.*, 717 F.2d 828, 832 (3d Cir. 1983) (quoting *Wall v. United States*, 592 F.2d 154 (3d Cir. 1979)). Rule 50(a) protects that spirit by requiring notice to afford the other party the opportunity to cure possible technical defects in its proof. *Id.* at 831

ArthroCare was fully aware of Smith & Nephew's invalidity defenses and made a deliberate decision to not put on ***any*** rebuttal case on invalidity. Instead, ArthroCare chose only to cross-examine Smith & Nephew's experts and called only one rebuttal witness to support its copying theory (D.I. 417 at 1544-48) before resting (D.I. 417 at 1548). Further, ArthroCare has not shown any prejudice or that it would have proceeded any differently if Smith & Nephew had presented a more detailed JMOL motion.

Thus, ArthroCare's argument that Smith & Nephew's Rule 50 rights were not preserved has no merit.

2. The PTO Granted Smith & Nephew's Reexamination Requests

As discussed in Smith & Nephew's Reply Brief in Support of Its Inequitable Conduct Case, the PTO recently granted Smith & Nephew's requests to reexamine each of the patents-in-suit. (D.I. 464 at 1; *see also* Exs. A, B and C attached to the Declaration of Eugene Joswick in Support of this Brief, hereafter "Joswick Dec."). The PTO's granting of the requests supports

[10] None of the cases cited by ArthroCare address the issue of the Court's ability to reserve the issues and the parties' rights.

[11] Even *Duro-Last, Inc. v. Custom Seal, Inc.*, 321 F.3d 1098, 1106 (Fed. Cir. 2003), a case cited by ArthroCare, recognized that "[a] liberal reading of the rule may be appropriate in some circumstances, such as when the failure is largely a technical one, and no prejudice results."

Smith & Nephew's contention that the jury was misled by ArthroCare during trial and that its verdict of validity was against the great weight of the evidence. For example, as the Order Granting the Request to reexamine the '592 patent points out: "Roos '198 discloses an electrically conducting fluid in Claim 1. The teaching of an electrically conducting fluid by Roos '198 was not considered in the prosecution of the application, which became the Eggers et al. patent." (Joswick Dec Ex. C at 3). This same "teaching" was presented to the jury during trial but was ignored despite the lack of any meaningful rebuttal by ArthroCare. The Court should consider these new reexamination determinations in evaluating Smith & Nephew's evidence supporting its request for JMOL on the anticipation issues.[12]

3. The Asserted Claims of the '536 Patent Are Invalid

a. Anticipation by the Pao '499 Patent

ArthroCare has failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Pao '499 patent.

ArthroCare now argues that its cross-examination of Dr. Taylor was directed to the "current flow path" limitation of claim 45, rather than the "minimize direct contact" limitation of claim 47. (D.I. 467 at 29). ArthroCare's argument is curious since its questions to Dr. Taylor were clearly about "contact." But even if these questions somehow related to current flow path, the cross-examination did not overcome Smith & Nephew's *prima facie* case. The testimony from Dr. Taylor to which ArthroCare refers was clearly directed to only one embodiment described in the Pao '499 reference which discloses placing both electrodes in contact with tissue (D.I. 416 at 1408-10):

> Q. And so, if you're interpreting the outer electrodes as being a return, that means there the return electrode as described in this paragraph ***is in contact*** with the tissue; right?
>
> A. Yes. And ***this is one description how it could be used, but there are other descriptions where the outer electrode and return electrode does not contact tissue.***
>
> * * *

[12] The fact that the PTO has granted these reexamination requests negates ArthroCare's argument that Smith & Nephew had a "more difficult" burden because the PTO had previously considered these references. (D.I. 467 at 28-29, 31).

Q. So in this description of its use, what it's essentially saying is that you put ***the active and the return in contact*** with tissue and then the current then will flow between those two electrodes through the tissue; right?

A. And this is one way, yes. The answer to your question is yes, and ***this is one way you use the device. It's not the only way.***

However, ArthroCare's reliance on a different embodiment does not rebut Smith & Nephew's *prima facie* case based on the anticipating embodiments disclosed in the Pao '499 patent. *See Ultradent Prods., Inc. v. Life-Like Cosmetics, Inc.*, 127 F.3d 1065, 1068 (Fed. Cir. 1997).

Indeed, the Pao '499 patent itself explicitly and inherently discloses that current will flow through the electrically conductive fluid. First, the current flow through the saline is explicitly disclosed. (DTX-21 at col. 7, lines 63-67). Second, the Pao '499 patent teaches that saline is introduced through the active electrode. (*Id.*). Since saline is an electrically conductive fluid, the current will necessarily flow through the saline between the active and return electrodes. Dr. Goldberg recognized this inherent property when discussing the accused products:

> And again, because it's electrically conductive fluids, when...the high-frequency generator, is activated, there will be current flow path between the active and the return.

(D.I. 411 at 406; *see also* D.I. 411 at 398 and 412). The PTO also recognized this in granting Smith & Nephew's reexamination request based on the Pao '499 patent: "Requestor presents materially new arguments with respect to Pao '499 disclosure of introducing saline to the electrosurgical site and the saline's inherent property of conduction." (Joswick Dec. Ex. A at 4).

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Pao '499 patent, and the Court should grant JMOL on this issue.

b. Anticipation by the Doss '007 Patent

ArthroCare has also failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Doss '007 patent.

As discussed in our Opening Brief, the Doss '007 patent discloses a return electrode under the Court's claim construction: "an electrode having a larger area of contact than an active electrode, thus affording a lower current density." (D.I. 459 at 26-28). ArthroCare's argument

that Doss '007 does not disclose a return electrode disregards the Court's claim construction of return electrode and focuses only on the definition of active electrode. (D.I. 467 at 30). ArthroCare argues that since the outer electrode has some tissue effect, it must be an active electrode. But as we showed in our Opening Brief (D.I. 459 at 27-28), ArthroCare ignored the Court's admonishment during trial that it needed to show there was "no difference" between the active and return electrodes. (D.I. 416 at 1389). Even now, in its Opposition Brief, ArthroCare does not argue that there is no difference between the two electrodes. ArthroCare's argument that the outer electrode has a tissue effect, and thus is an active electrode (D.I. 467 at 30), is clearly contrary to the Court's claim construction and should be rejected.[13]

As also discussed in our Opening Brief, the Doss '007 patent discloses a connector at the proximal end of the device under the Court's claim construction: "a structure that electrically links the electrode terminal to the high frequency power supply." (D.I. 459 at 29-30). Once again ArthroCare focuses on the fact that the location of the connector is not explicitly disclosed. (D.I. 467 at 30). However, this is irrelevant because the location is inherently disclosed.[14] For example, Figure 7 shows both electrodes passing out the proximal (top) end of the device (DTX-17 at Fig. 7), which is the only place a connector could be located to "link the electrode terminal to the high frequency power supply." Further, and contrary to ArthroCare's argument, a single wire passing through the proximal end of the device from the active electrode to the power supply satisfies the Court's claim construction of "connector." There is no requirement in the Court's claim construction that the connector not be a conductor, or that it be a separate structure which is located only near the proximal end of the shaft, as ArthroCare argues.[15]

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[13] ArthroCare's argument about Dr. Taylor's deposition testimony is also unavailing. (D.I. 467 at 30-31). Even if the jury were to disregard that testimony, the jury cannot disregard the explicit disclosure in the reference (DTX-17 at Figs. 7 and 8) and this Court's claim construction. *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 632 (Fed. Cir. 1987).

[14] *See, e.g., Schering Corp. v. Geneva Pharm., Inc.*, 2003 WL 21767852 at *4 (Fed. Cir. Aug. 1, 2003) (a prior art reference need not supply an "express description of any part of the claimed subject matter" to anticipate).

[15] Had there been any such requirement, the accused products would not have a "connector."

Accordingly, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Doss '007 patent, and the Court should grant JMOL on this issue.

c. Anticipation by Roos '198 and the Elsässer Article

ArthroCare has also failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Roos '198 patent and the Elsässer Article.

ArthroCare first argues that the Roos '198 patent and the Elsässer Article do not disclose a connector near the proximal end of the shaft. (D.I. 467 at 31-33). With respect to the Elsässer Article, ArthroCare does not deny that it failed to ask Dr. Taylor a single question or present any evidence to contradict the disclosure in the Elsässer Article. Instead, ArthroCare says that Dr. Taylor identified no disclosure of a connector in the Article. (*Id.* at 31). ArthroCare is clearly wrong, since Dr. Taylor said "the one that is shown is right there." (D.I. 416 at 1298).[16] Moreover, Figure 9 of Elsässer clearly shows connectors at the proximal end of the shaft, and does not show anything else that could be used to connect the electrodes to the generator. Thus, one of these connectors must necessarily be used to connect the active electrode to the generator.

With respect to the Roos '198 patent, ArthroCare mischaracterizes the passages that Smith & Nephew quotes in its Opening Brief. ArthroCare argues that the first passage quoted, regarding the leads 16, "discusses a cable leading to the return electrode." (D.I. 467 at 32). ArthroCare is wrong. Figures 7 and 8, which the quoted passage describes, clearly show that the leads 16 are connected to the active electrode (12) and not the return electrode (11). The cable leading to the return electrode is labeled 14, not 16. (DTX-11 at col. 7, lines 5-8).

ArthroCare also argues that the Roos patent and Elsässer Article do not disclose electrically conducting fluid. (D.I. 467 at 33-34). In doing so, ArthroCare continues to make the same tortured arguments in an attempt to avoid the explicit disclosures in both references. For example, ArthroCare points to an irrelevant patent issued some ten years later, to the fact that

[16] ArthroCare argues that because Dr. Taylor also used the word "connector" when describing a fluid connection in the Pao '499 patent, the jury was entitled to disregard any testimony he gave on connectors. (D.I. 467 at 32). This argument borders on the frivolous, since Dr. Taylor clearly described the connector in the Elsässer Article as an electrical connector. (D.I. 416 at 1298).

saline or ringers lactate is not explicitly recited, and the fact that Mr. Roos used the same generic term ("washing liquid") for the fluid used with monopolar and bipolar procedures,[17] all in an attempt to side-step the explicit disclosures in claim 1 of the Roos patent and its file history.

ArthroCare's argument that claim 1 of the Roos patent disclosed non-conductive fluid since non-conductive fluids will conduct some electrical current (D.I. 467 at 34) is nonsense. Roos claim 1 says that the purpose of the liquid was "***to provide*** electrical conductance," which clearly meets the Court's definition of "any fluid that ***facilitates*** the passage of electrical current." (D.I. 353). Further, the Roos prosecution history calls the washing liquid an "electrical conductor" and says "the washing fluid would conduct electrical current just as the tissue fluid [*e.g.*, blood] and the tissue itself of the human body." (DTX-321, 8/12/77 Amendment at p. 7). The PTO also recognized that the Roos '198 patent discloses an electrically conductive fluid in granting Smith & Nephew's new reexamination request. (Joswick Dec. Ex. A at 3).

ArthroCare also argues that Smith & Nephew's quote from the Elsässer Article does not support a disclosure of an electrically conductive fluid. (D.I. 467 at 34, n.12). However, in so arguing, ArthroCare misleadingly cropped the following sentence out of the passage quoted by Smith & Nephew: "***The current flows*** directly from the cutting loop to the neutral electrode ***through the adjacent tissue to be cut and the irrigation liquid.***" (DTX-59B at 4 and D.I. 459 at 32). As this sentence shows, the Elsässer Article explicitly discloses electrically conductive fluid.

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Roos '198 patent and Elässer Article, and the Court should grant JMOL on this issue.

4. The Asserted Claims of the '882 Patent are Invalid

a. Anticipation by the Manwaring '138 Patent

ArthroCare has also failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Manwaring '138 patent. ArthroCare's argument is based on

[17] To this very day, electrically conductive saline is called "irrigation" liquid. (D.I. 416 at 1462).

the lack of explicit disclosure of UV photons in the Manwaring '138 patent, and that the suction disclosed is not sufficient to evacuate fluid generated at the target site. (D.I. 467 at 35-36).[18]

First, the undisputed testimony at trial shows that UV photons are inherently produced in the Manwaring '138 patent due to the operation of the laws of physics.[19] Dr. Taylor testified that a spark in aqueous solution will generate UV photons "because of the transition of the hydroxyl ion." (D.I. 416 at 1420). Dr. Manwaring also testified that sparking in water will produce UV photons. (D.I. 414 at 918-19). Moreover, this testimony is corroborated by the teaching of the '882 patent itself, which describes the production of UV photons from the "high electric field generated ... within the electrically conductive liquid." (*See* PX-2 at col. 4, lines 47-57). ArthroCare introduced no contrary evidence.[20]

Second, ArthroCare did not rebut the fact that the Manwaring '138 patent explicitly discloses evacuating fluid generated at the target site: "fluid ... could be sucked into or drawn up tube 28 to a sufficient elevation." (DTX-46 at col. 7, lines 26-31). In its Opposition, ArthroCare denies that it ever argued that ***all*** of the fluid had to be evacuated, after we pointed out that was not required by the claim. (D.I. 467 at 35-36). Now ArthroCare argues that some of the fluid would remain "in the ***vicinity***" of the tissue. (*Id.*). But this is the same argument under a different name. ArthroCare is still trying to read extraneous limitations into the claim, which only requires "evacuating" (and is met by Manwaring) and does not say anything at all about "removing" "from beyond the vicinity" of the tissue.

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[18] ArthroCare also argues that Manwaring discloses sparking followed by vaporization. (D.I. 467 at 35). However, as Dr. Goldberg admitted, the claim requires vaporization ***and*** sparking, not vaporization ***then*** sparking. (D.I. 415 at 1087).

[19] ArthroCare is under a continuing duty to apprise the PTO of any litigation activity (Joswick Dec. Ex. B at 3; 37 C.F.R. 1.555), and must disclose the Skromme report to the PTO showing that the commercial embodiment of the Manwaring patent did in fact produce UV photons.

[20] ArthroCare now challenges Dr. Taylor's explanation that the production f UV photons was a matter of elementary college chemistry, by saying that he "could produce no college chemistry textbook ... that supported his position." (D.I. 467 at 35, n.14). But ArthroCare never asked him for such a college textbook.

Moreover, the PTO recognized the validity of both of these arguments in granting Smith & Nephew's reexamination request based on the Manwaring '138 patent: "These teachings were not previously considered nor addressed in prior examinations of the patent. There is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not the claims are patentable." (Joswick Dec. Ex. B at 3).

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Manwaring '138 patent, and the Court should grant JMOL on this issue.

b. Anticipation by the Slager Article

ArthroCare also failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Slager Article. ArthroCare has raised three arguments.

First, ArthroCare protests that the Slager Article only discloses applying energy to a piece of aortic tissue in a petri dish. (D.I. 467 at 36). As discussed in our Opening Brief, this is sufficient to meet the claim since Mr. Eggers' reduction to practice only involved experiments on chicken parts in a bowl. (D.I. 459 at 38). ArthroCare cites *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572 (Fed. Cir. 1996), but that case actually supports Smith & Nephew's position. In *Mahurkar*, the patentee was attempting to pre-date a reference by showing a prior reduction to practice. *Id.* at 1578. The issue was whether the patentee's brittle prototype catheters met the "prevent[ing] the distal end of the catheter from traumatizing" the vessel limitation. *Id.* The court held they did, since the patentee "knew that his invention would become suitable for its intended purpose by simple substitution of a soft, biocompatible material." *Id.* The Slager Article meets all the limitations of the claim for the same reasons. Further, the ultimate "clinical" use of the device is explicitly disclosed. (DTX-65 at 1386). ArthroCare's argument is also undercut by Dr. Goldberg's testimony on infringement (D.I. 415 at 1088): "to determine what a device can and cannot do often requires scientific analysis outside of the body." If analysis outside the body is sufficient for infringement evaluations, it is also sufficient for invalidity.

Second, ArthroCare argues that the Slager Article does not explicitly disclose the production of UV photons. However, as discussed above with respect to the Manwaring '138

patent, any sparking in an aqueous solution (which is disclosed in Slager—*see* DTX 65 at 1384-85) will inherently produce UV photons by operation of the laws of physics.

Finally, ArthroCare says that Dr. Taylor admitted that the Slager Article does not explicitly disclose the location of the suction lumen for evacuating the fluid generated at the target site. (D.I. 467 at 37). However, this does not overcome the inherent disclosure in the Slager Article. Since Slager discusses the use of a suction technique to remove the gas bubbles that are locally produced at the active electrode (DTX-65 at 1383, 1386), the suction lumen would necessarily be adjacent the active electrode.

Moreover, the PTO has recognized the validity of these arguments in granting Smith & Nephew's reexamination requests based on the Slager Article: "These teachings were not previously considered nor addressed in prior examinations of the patent. There is a substantial likelihood that a reasonable examiner would consider these teachings important in deciding whether or not the claims are patentable." (Joswick Dec. Ex. B at 3).

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Slager Article. The Court should grant JMOL in Smith & Nephew's favor on this issue.

c. Lack of Enablement

ArthroCare failed to rebut Smith & Nephew's showing that the asserted claims of the '882 patent are not enabled, and thus JMOL in Smith & Nephew's favor is proper.

ArthroCare's main argument is that the '882 patent lists preferred ranges for many of the variables. (D.I. 467 at 39). However, the '882 patent itself notes that the invention only works "under optimal conditions." (JTX-2 at col. 10, lines 65-67). During trial, ArthroCare asked Dr. Taylor about seven of the listed variables. (D.I. 416 at 1436-1438).[21] Most of even the more preferred ranges for those variables are still quite broad; *e.g.*, voltage ranges of 100 to 400 volts, frequency of 50 to 400 kHz, active electrode contact area of 0.005 mm^2 to 0.5 mm^2, etc. These broad ranges for all the variables listed in the '882 patent result in hundreds, if not thousands, of

[21] Some of these limitation ranges were discussed in the table at page 43 of our Opening Brief, which shows how these preferred ranges would produce the Manwaring device.

possible combinations and permutations. Clearly, one would be required to perform extensive undue experimentation to determine exactly which combinations provided the required "optimal conditions" and which did not. *See, e.g., University of Rochester v. G.D. Searle & Co.*, 249 F.Supp.2d 216 (W.D.N.Y. 2003) (patent invalid for lack of enablement since it provided "precious little guidance" for "narrowing the range" of candidate compounds, and thus would require undue experimentation). Thus, the '882 patent is not enabled.

ArthroCare also argues that there was no basis for Dr. Taylor "to equate 'Coblation' with the claims of the '882 patent." (D.I. 467). This is simply incorrect. For example, Jean Woloszko, ArthroCare's V.P. of Research and Development, testified that "Coblation" is ArthroCare's term for conducting current through a conductive fluid and creating a glow discharge plasma to ablate tissue. (D.I. 415 at 1048-49). This is exactly what the '882 patent teaches happens when the so-called "optimal conditions" are realized. (*See* JTX-2 at col. 10, line 65 to col. 11, line 1). Thus, there was ample evidence for Dr. Taylor to equate the claims of the '882 patent with Coblation.

Accordingly, ArthroCare did not rebut Smith & Nephew's *prima facie* case of invalidity based on non-enablement, and the Court should grant JMOL on this issue.

5. The Asserted Claims of the '592 Patent Are Invalid

a. Anticipation by the Doss '007 Patent

ArthroCare has failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Doss '007 patent.

ArthroCare again argues that Doss does not disclose a return electrode. (D.I. 467 at 39). However, as discussed above, this argument fails because the outer electrode of the embodiment shown in Figures 7 and 8 is a return electrode under the Court's claim construction, which ArthroCare ignored.

ArthroCare also argues that the generator disclosed in the Doss '007 patent is not necessarily a sine wave generator, and if it is not, the voltage might not be in the range required by claims 21 and 42. (D.I. 467 at 39). But ArthroCare's speculation is unavailing, since Doss

clearly says that "***any*** radio-frequency current" having the specified characteristics "is suitable" (DTX-17 at col. 3, lines 30-38), and thus a sine wave is inherently included. Further, it was undisputed at trial that only sine wave generators were commercially available. (D.I. 416 at 1402).[22]

Thus, ArthroCare did not rebut Smith & Nephew's *prima facie* case of anticipation based on the Doss '007 patent, and the Court should grant JMOL on this issue.

b. Anticipation by the Slager Article

Finally, ArthroCare failed to rebut Smith & Nephew's showing that it should be granted JMOL of anticipation in view of the Slager Article. ArthroCare again argues that the Slager Article does not explicitly disclose applying energy to a body structure of a patient. However, for the reasons shown above, this argument must fail.[23]

ArthroCare also argues that the Slager Article does not explicitly disclose the location of the return electrode. (D.I. 467 at 40). But ArthroCare is incorrect, since Slager clearly discloses that the aortic segments were only 7 cm. long, whereas the electrodes were spaced up to 10 cm. apart. (DTX-65 at 1382-83). As such, a return electrode that was up to 10 cm. away from the active electrode could not possibly have been in contact with tissue that was only 7 cm. long. Moreover, contrary to ArthroCare's argument, Dr. Taylor never testified that he could not determine the location of the return electrode. (D.I. 416 at 1414-18). In fact, ArthroCare never even asked him about the return electrode in the *in vitro* tests, which Dr. Taylor relied upon. (*Id.*).

Thus, ArthroCare has not overcome Smith & Nephew's *prima facie* case of anticipation based on the Slager Article, and the Court should grant JMOL on this issue as well.

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[22] Had Doss used an unusual generator such as the custom-built square wave generator of the Slager Article as ArthroCare suggests, it would have had to have been disclosed to satisfy the best mode requirement.

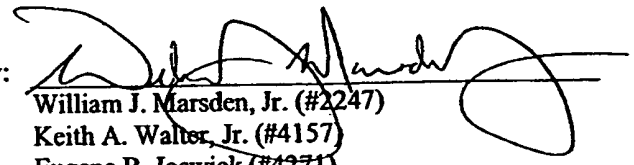
[23] In granting Smith & Nephew's reexamination request for the '592 patent, the Examiner misinterpreted the Slager Article as not anticipating. (Joswick Dec. Ex. C at 3). However, ArthroCare is under a continuing duty to apprise the PTO of material information disclosed during these proceedings (*Id.* at 4-5; 37 CFR 1.555), including Mr. Eggers' testimony that he reduced the claimed invention to practice in a bowl outside the human body.

III. CONCLUSION

For all the foregoing reasons, as well as the reasons set forth in Smith & Nephew's Opening Brief, Smith & Nephew respectfully requests that the Court enter JMOL that the '882 certificate of correction is invalid, that the accused products do not infringe the asserted claims, that the asserted claims of the '536 and '592 patent are anticipated by the prior art, and that the asserted claims of the '882 patent are not enabled and are anticipated by the prior art.

Dated: August 14, 2003

FISH & RICHARDSON P.C.

By: 

William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
Eugene B. Joswick (#4271)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070
Facsimile: (302) 652-0607

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

Kurtis D. MacFerrin
Karen I. Boyd
500 Arguello Street, Suite 500
Redwood City, CA 94063
Telephone: (650) 839-5070
Facsimile: (650) 839-5071

Attorneys for Defendant
SMITH & NEPHEW, INC.

CERTIFICATE OF SERVICE

I hereby certify that on this 14th day of August, 2003, a true and correct copy of SMITH & NEPHEW'S REPLY BRIEF IN SUPPORT OF ITS RULE 50(b) MOTION FOR JUDGMENT AS A MATTER OF LAW was caused to be served on the attorneys of record at the following addresses as indicated:

BY HAND DELIVERY
Jack B. Blumenfeld, Esq.
Morris, Nichols, Arsht & Tunnell
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899-1347

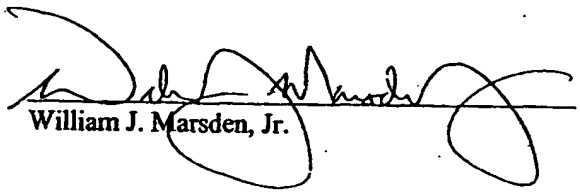
Attorney for Plaintiff
ArthroCare Corporation

BY FEDERAL EXPRESS
Matthew D. Powers, Esq.
Jared Bobrow
Perry Clark, Esquire
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Attorneys for Plaintiffs
ArthroCare

BY HAND DELIVERY
Steven J. Balick, Esq.
Ashby & Geddes
222 Delaware Avenue, 17th Floor
P. O. Box 1150
Wilmington, DE 19899

Attorney for Plaintiff/Counterclaim Defendant
Ethicon, Inc.



William J. Marsden, Jr.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ARTHROCARE CORPORATION, Plaintiff, v. SMITH & NEPHEW, INC. Defendant.	C.A. No. 01-504-SLR
SMITH & NEPHEW, INC., Counterclaim Plaintiff, v. ARTHROCARE CORPORATION, AND ETHICON, INC., Counterclaim Defendants.	**CONFIDENTIAL** **FILED UNDER SEAL**

SMITH & NEPHEW'S REPLY BRIEF IN SUPPORT OF ITS INEQUITABLE CONDUCT CASE

Dated: July 24, 2003

FISH & RICHARDSON P.C.
William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
919 N. Market Street, Suite 1100
P.O. Box 1114
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Kurtis D. MacFerrin
Karen I. Boyd
500 Arguello Street, Suite 500
Redwood City, California 94063
Telephone: (650) 839-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

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I. INTRODUCTION

There has been a significant new development since Smith & Nephew filed its Opening Inequitable Conduct Brief (D.I. 442). In late June and early July, the United States Patent and Trademark Office ("PTO") granted Smith & Nephew's requests to reexamine all three of the patents-in-suit. (*See* Exs. A, B, and C attached to the Declaration of Keith A. Walter, Jr. in Support of Smith & Nephew's Reply Brief in Support of its Inequitable Conduct Defense, hereafter "Walter Dec. Ex. ___").

In granting these reexaminations, the PTO made several significant statements confirming the materiality of the information withheld by ArthroCare. For example, the PTO said that (1) claim 1 of the Roos '198 patent discloses electrically conductive fluid; (2) the electrically conductive fluid disclosure was overlooked by the previous examiners; and (3) Smith & Nephew's arguments (from Smith & Nephew's summary judgment briefs and expert reports) and the Roos Declaration presented the Roos '198 patent in a "new light," which raised substantial new questions as to the patentability (*i.e.*, validity) of the patents-in-suit.

II. SUMMARY OF ARGUMENT

ArthroCare has shown a pattern of behavior in its prosecution of the patents-in-suit that violates the uncompromising duty of candor it owes to the PTO. It should not be rewarded with enforceable patents. ArthroCare's pattern includes:

- During the prosecution of the '592 patent, John Raffle, ArthroCare's patent attorney, argued that the Roos '198 patent ***did not*** disclose electrically conductive fluid, but he withheld a decision from a district court that held that Roos '198 ***did*** disclose electrically conductive fluid. As the court in *Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.*, 53 U.S.P.Q.2d 1302 (N.D. Ill. 1999), held, the materiality of the district court decision "lies in [the judge's] own determination that the recited prior art was sufficient to overcome the statutory presumption of validity. This determination is material in its own right." *Id.* at 1331

- Also during the prosecution of the '592 patent, Mr. Raffle argued that the Roos '667 patent supported his arguments about the Roos '198 patent, but withheld the district court decision that rejected that argument.

- During the reexamination of the '536 patent, Mr. Raffle withheld Smith & Nephew's summary judgment and expert report arguments on validity, as well as

the evidence in the Roos declaration, which the PTO has now said present the prior art "in a new light," thus raising a substantial new question f patentability.

- During the prosecution of the '882 patent, Mr. Raffle did not tell the PTO that the "corrections" he was making broadened the scope of the patent, but in trial even ArthroCare's paid expert witness admitted that they did broaden the patent.

In its Opposition, ArthroCare has raised many excuses in an attempt to justify its conduct in the PTO—such as calling Mr. Raffle "sloppy." None of these excuses has any merit. Indeed, many appear to be nothing more than an attempt to confuse the Court with respect to the legal distinctions between patent litigation in the courts and patent prosecution in the PTO.

Mr. Raffle's hide-the-ball approach to obtaining the patents in suit is not the approach of a "reputable lawyer" deserving "respect for [his] integrity" as a member of an honorable profession, and does not "sustain the good name of the bar itself." *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988). Smith & Nephew's charge is not a "plague," *id.*; it is an exhortation to this Court that ArthroCare's behavior in the PTO should not be countenanced.

III. ARGUMENT

A. The Evidence of ArthroCare's Inequitable Conduct

ArthroCare spends the first five pages of its argument pleading hyper-technical evidentiary arguments in an attempt to dissuade the Court from considering the overwhelming evidence of ArthroCare's violation of its duty of candor to the PTO. ArthroCare cites caselaw that turns on unfair surprise and prejudice, but describes no unfair surprise or prejudice that it has suffered. And it tries to parse its inequitable conduct into thin slivers in an attempt to have the Court ignore each of the slivers, when it is ArthroCare's pattern of inequitable behavior that should be the focus. The Court should reject ArthroCare's invitation to stick its head in the sand and ignore ArthroCare's repeated breaches of the utmost duty of candor owed to the PTO during the *ex parte* prosecution of a patent application.

ArthroCare's hyper-technical evidentiary arguments are unavailing in any event. One of ArthroCare's arguments is that Smith & Nephew should not be able to refer to ***the very evidence that Smith & Nephew pled*** as the basis for its inequitable conduct claim. That evidence is

already before the Court and has already been considered by the Court. ArthroCare was well-aware of the evidence, and suffers no unfair surprise or prejudice by Smith & Nephew's reliance on it. ArthroCare's request to exclude this evidence should be rejected.

For example, ArthroCare asserts that the Court should ignore Judge Orrick's Memorandum and Order of December 1, 1998 ("Orrick opinion," Ex. D attached to the Declaration of William J. Marsden In Support of Smith & Nephew's Opening Brief, D.I. 443) from the prior *ArthroCare v. Ethicon* case because it was not presented to the jury. But the Orrick opinion was cited in Smith & Nephew's initial counterclaim in support of the inequitable conduct defense relating to the '592 patent. (D.I. 10 at 7-9). Certainly ArthroCare cannot complain of any surprise or unfairness over the fact that Smith & Nephew has relied on the very document it pled at the outset of this case. Moreover, the Court has previously considered the Orrick opinion several times (e.g., D.I. 49, 321, 339). Thus, there is no "last minute production of evidence" as in *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 550-51 (Fed. Cir. 1998), and there is no sound reason for the Court to ignore ArthroCare's failure to adequately disclose the Orrick opinion to the PTO.

ArthroCare also argues that the Court should disregard its failure to disclose Smith & Nephew's summary judgment briefs, its experts' reports on invalidity, and the Roos Declaration in the '536 reexamination. But again, ArthroCare is trying to exclude evidence that formed the basis for the inequitable conduct charge ***when the charge was pled.*** There is no surprise and no prejudice to ArthroCare. The inequitable conduct charges for the '536 reexamination were added to the case during the pretrial conference on April 15, 2003 (*See* D.I. 371 at 21-22, 42-43). At that time, Smith & Nephew explained that the basis for the charge was spelled out in its Second Supplemental Response to Interrogatory No. 6, which explained ArthroCare's failure to submit Smith & Nephew's summary judgment briefs and experts' reports to the PTO. (Walter Dec. Ex. D). The Roos Declaration is an exhibit to both the invalidity summary judgment brief (*see* D.I. 267 at Ex. 8), and Dr. Taylor's expert report (*see* D.I. 263 at Ex. 1, Tab 20). Again, ArthroCare can claim no surprise or unfairness at the consideration of this material, which has also previously

been analyzed by the Court (e.g., D.I. 49, 321, 339). Thus, ArthroCare's request to disregard this clearly relevant evidence should be denied.

B. ArthroCare's Inequitable Conduct During the '592 Prosecution

Turning to the substantive arguments, ArthroCare committed inequitable conduct in the prosecution of the '592 patent with its arguments that the Roos '198 patent does not disclose electrically conductive fluid. It made these arguments knowing that Judge Orrick in the prior *Ethicon* case had specifically found Roos '198 did disclose electrically conductive fluid. ArthroCare made misleading arguments about other references, without bothering to discuss the Orrick opinion or the Elsässer and Roos article, both of which contradicted ArthroCare's arguments. (D.I. 442 at 10-11). In its Opposition, ArthroCare has made several excuses for its behavior. None has merit.

1. Smith & Nephew's Inequitable Conduct Defense is Proper

ArthroCare tries to dodge its inequitable conduct, by claiming that each piece of evidence was not properly pled. But Smith & Nephew asserted its inequitable conduct defense related to the '592 patent when it filed its Answer and Counterclaims on September 13, 2001. (D.I. 10 at 7-9, ¶¶ 15-26). In its opposition, ArthroCare tries to argue that this defense consisted of many different and unrelated defenses, by breaking it into multiple pieces, arguing that each set of facts relates to a different defense. (*See* D.I. 462 at 4). This is simply wrong. Smith & Nephew's defense is based upon ArthroCare's arguments to the PTO that are contrary to the Orrick opinion and ArthroCare's failure to properly disclose that opinion to the PTO.[1]

Smith & Nephew has, in its Opening Brief, simply provided more detailed arguments to support its inequitable conduct case. There is "nothing about the particularized pleading requirement [that] acts as a bar to further supplementing those facts, as they are uncovered."

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[1] Judge Orrick's rejection of ArthroCare's arguments about the Roos '667 patent, the Roos '198 patent, and the Elsässer and Ross article are at pages 16-17 of his opinion. Thus, contrary to ArthroCare's argument (D.I. 462 at 5), these are not "new allegations." Moreover, all f this was known t Mr. Raffle, who was undisputedly aware of the Orrick opinion.

Agere Systems Guardian Corp. v. Proxim, Inc., 190 F. Supp. 2d 726, 734 (D. Del. 2002).[2] Nor can Arthr Care show that it was surprised, disadvantaged, or substantially prejudiced, since it has long known about the Orrick opinion and its failure to submit it to the PTO. Moreover, everything that ArthroCare did and did not say to the PTO about the Orrick opinion is already of record in the '592 file history. (DTX 300).

ArthroCare's only attempt to show prejudice is its claim that it did not have an opportunity to introduce evidence at trial to rebut the facts related to ArthroCare's non-disclosure of the Orrick opinion. Yet it points to no actual rebuttal evidence that it would have presented. Indeed, its only rebuttal to the inequitable conduct charge is that the "existence" of the Orrick opinion was disclosed as part of a list of 84 items in an IDS during prosecution. (*See* D.I. 462 at 12-22). It does not dispute the fact that the Orrick opinion itself was not provided to the PTO. Also, ArthroCare had the opportunity to fully cross-examine Mr. Raffle on any issues Smith & Nephew asked him about during trial. *See Craft v. U.S.*, 233 F.3d 358, 372 (6th Cir. 2000) (finding that plaintiff failed to show how she would be prejudiced by defendant's amendment to pleadings, conforming to new evidence, where plaintiff had not been prohibited from cross-examining defendant's witnesses on the amended issue), *rev'd on other grounds*, *United States v. Craft*, 535 U.S. 274 (2002); *see also Clemco Industries v. Commercial Union Ins. Co.*, 665 F. Supp 816, 830 (N.D. Cal. 1987) (finding that plaintiff's cross examination of defendant's witnesses afforded it a fair opportunity for rebuttal and that plaintiff had therefore not been prejudiced according to Rule 15(b)).

ArthroCare also argues that Smith & Nephew should not be allowed to rely on the Orrick opinion because it is not in the trial record. (D.I. 462 at 19). However, as discussed above, it is indeed part of the inequitable conduct record because it was cited in Smith & Nephew's pleadings

[2] Further, as ArthroCare itself admits, even completely new theories, which these are not, should only be excluded when the opposing party would be surprised, disadvantaged or substantially prejudiced. (D.I. 462 at 6-7). As *Commissioner v. Transport Mfg. & Equipment Co.*, 478 F.2d 731, 736 (8th Cir. 1973), a case cited by ArthroCare, holds, a party does not "necessarily lose[] his right to pursue a theory...that is not specifically raised before or at trial. The basic consideration is whether the [other party] is surprised and disadvantaged when the" party failed to plead the defense.

on the issue. (D.I. 10 at 7-9). Moreover, as pointed out repeatedly by ArthroCare, the ***existence*** of the Orrick opinion is "disclosed" in the '592 prosecution history. (DTX 300, October 25, 1999 IDS), which is in the trial record. Further, in sharp contrast to the situation in *ATD Corp.*, 159 F.3d at 550-51, ArthroCare was fully aware of Smith & Nephew's reliance on this opinion long before trial, and can claim no unfair surprise or prejudice. In fact, ArthroCare recognized the relevance of the Orrick opinion to the inequitable conduct case in its Motion *in Limine* to exclude the opinion from trial, where it argued that the Orrick opinion should not be presented to the jury because it was only relevant to the inequitable conduct case. (*See* D.I. 321 at n. 3).[3] Thus, the Court should consider the contents of the opinion, which it has previously considered (D.I. 49, 367), in its analysis of the inequitable conduct claim.

2. ArthroCare's Intent to Deceive the PTO

ArthroCare withheld this material information with the intent to deceive the PTO. In most cases, including here, intent to deceive is not proven with direct evidence, but rather is inferred from circumstantial evidence. *Paragon Podiatry Lab, Inc. v. KLM Labs., Inc.* 984 F.2d 1182, 1189-90 (Fed. Cir. 1993); *see also Merck & Co. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1422 (Fed. Cir. 1989); *LaBounty Mfg., Inc. v. U.S. Intern. Trade Com'n*, 958 F.2d 1066, 1076 (Fed. Cir. 1992) ("Direct proof of wrongful intent is rarely available but may be inferred from clear and convincing evidence of the surrounding circumstances."); *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1442 (Fed. Cir. 1991); *Critikon Inc. v. Becton Dickinson Vascular Access Inc.*, 28 U.S.P.Q. 2d 1362, 1370 n.2 (D. Del. 1993) ("Because direct evidence of an intent to deceive rarely exists, the Court may rely on circumstantial evidence leading to an inference of intent to mislead as the basis for a finding of inequitable conduct."); *Molins PLC v. Textron, Inc.*, 821 F. Supp. 1551, 1566 (D. Del. 1992); *Carroll Touch Inc. v. Electro Mechanical Systems Inc.*, 24 U.S.P.Q. 2d 1349, 1353 (C.D. Ill. 1992) ("Deliberate conduct can be inferred from the fact that the applicant had knowledge of the material

[3] The motion *in limine* was granted. However, to the extent this Court may have previously questioned the relevance of the Orrick opinion as noted by ArthroCare (D.I. 462 at

information."), *aff'd in part & vacated in part*, 15 F.3d 1573 (Fed. Cir. 1993).[4] And here, ArthroCare's intent to deceive the PTO is shown clearly and convincingly by the circumstances surrounding ArthroCare's withholding of the material information.

In particular, the element of intent to deceive can be inferred from knowledge of the material information coupled with knowledge of the duty of disclosure. *LaBounty Mfg., Inc.*, 958 F.2d at 1076; *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1240 (Fed. Cir. 2003) ("The determinations that Mr. Pilard knew of the significance of the [withheld information] in combination with the finding that he knew of the duty to disclose is sufficient to establish intent.") In our Opening Brief, we showed that Mr. Raffle was aware of the Orrick opinion as well as his duty of disclosure as set forth in M.P.E.P. 2001.06(c). ArthroCare has not disputed either fact.

ArthroCare's intent to deceive the PTO can also be inferred from additional circumstantial evidence. Mr. Raffle provided the PTO with a list of materials from the Ethicon case "that reflected the parties' primary invalidity and enforceability arguments." (D.I. 462 at 12-13).[5] But The Orrick opinion does far more than merely reflect "the parties' primary invalidity and enforceability arguments"; it ***outright rejects ArthroCare's validity arguments***. Thus, the description of the Orrick opinion by Mr. Raffle is misleading. At a minimum, the patentee is required to describe the nature of the litigation materials. *Marlow Indus. v. Igloo Prods. Corp.*, 2002 WL 485698, at *4 (N.D. Tex. Mar. 28, 2002) (quoting *Critikon, Inc. v. Becton Dickinson Vascular Access, Inc.*, 120 F.3d 1253, 1259 (Fed. Cir. 1997)).[6] Mr. Raffle described the Orrick

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19), that was in relation to Smith & Nephew's defense of patent misuse, not in relation to its inequitable conduct defense.

4 ArthroCare's reliance on *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1417 (Fed. Cir. 1987) and *Fuji Photo Film Co. v. Jazz Photo Corp.*, 173 F. Supp. 2d 268, 276 (D. N.J. 2001) is misplaced. In both these cases, the improper inference of intent stemmed from a single fact. Here, an extensive series of facts and circumstances demonstrates ArthroCare's intent.

5 ArthroCare, trying to rebut the inference that Mr. Raffle buried the Orrick opinion in a long list of litigation related documents, says that the *Ethicon* litigation documents were listed in chronological order. (D.I. 462 at 18, n. 10). This is not true, as can readily be seen from the list. (DTX 300, October 25, 1999 IDS at pp. 3-8).

6 ArthroCare attempts to distinguish *Marlow Indus.* because in that case the patentee did not disclose the court's claim construction at all. ArthroCare's misleading characterization of the material Orrick opinion, in a misleadingly labeled list, is hardly less culpable.

opinion simply as a "Memorandum Decision and Order Regarding Preliminary Injunction Motion, issued December 2, 1998." (DTX 300, October 25, 1999 IDS at p. 5). While this description may be technically accurate, it is plainly misleading since it fails to inform the PTO that (1) the preliminary injunction was denied, (2) it was denied in light of adverse findings of fact regarding the validity of ArthroCare's patents, and (3) those fact findings were directly contrary to the arguments ArthroCare was making to the PTO.

ArthroCare's various arguments to overcome the examiner's rejections based on the Roos '198 patent provide additional evidence of its intent to deceive. (*See* D.I. 442 at 11-12). While ArthroCare could have tried to distinguish Judge Orrick's finding that the Roos '198 patent disclosed electrically conductive fluid, it was still required to disclose the Orrick opinion to the examiner in a manner that would apprise the examiner of its relevance. The intent does not stem from ArthroCare arguing against the findings in the Orrick opinion, but rather that it argued against Judge Orrick's findings ***without even telling the PTO about them and allowing the PTO to take those findings into consideration.***

Finally, intent is more easily inferred when the reference is highly material. "[A] patentee facing a high level of materiality and clear proof that it knew or should have known of that materiality, can expect to find it difficult to establish 'subjective good faith' sufficient to prevent the drawing of an inference of intent to mislead. A mere denial of intent to mislead (which would defeat every effort to establish inequitable conduct) will not suffice in such circumstances." *Critikon, Inc.*, 120 F.3d at 1257. ArthroCare has not shown any subjective good faith that would overcome its failure to sufficiently disclose the Orrick opinion.

3. The Orrick Opinion is Highly Material

There can be no dispute that the Orrick opinion is highly material. Information is material when "[i]t refutes, or is inconsistent with, a position the applicant takes in (i) Opposing an argument of unpatentability relied on by the [Patent] Office, or (ii) Asserting an argument of patentability." 37 C.F.R. § 1.56(b)(i)-(ii). ArthroCare does not dispute that the Orrick opinion is

inconsistent with its positions taken in opposing the examiner's r jection based on the Roos '198 patent.

ArthroCare throws up several red herrings in an attempt to downplay the Orrick opinion's significance. First, it argues that the Orrick opinion is not material because the evidence at trial and the examiner's allowance established that the Roos '198 patent does not disclose electrically conductive fluid. This is not correct[7] and, in any event, is not relevant. A reference does not have to actually render a patent invalid to be material. *See A.B. Dick v. Burroughs Corp.*, 798 F.2d 1392, 1392, 1400 (Fed. Cir. 1986) (affirming the district court's finding of inequitable conduct even though district court has also found the patents valid and infringed.); *see also Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226, 1237 (Fed. Cir. 2003); *PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc.*, 225 F.3d 1315, 1322 (Fed. Cir. 2000); *Merck & Co., Inc. v. Danbury Pharmacal, Inc.*, 873 F.2d 1418, 1421, (Fed. Cir. 1989); *Gardco Manufacturing, Inc. v. Herst Lighting Co.*, 820 F.2d 1209, 1214 (Fed. Cir. 1987); *Consolidated Aluminum Corp. v. Foseco International Ltd.*, 910 F.2d 804, 812 (Fed. Cir. 1990); *RCA Corp. v. Data General Corp.* 701 F. Supp. 456, 474 (D. Del. 1988), *aff'd*, 887 F.2d 1056 (Fed. Cir. 1989).

ArthroCare's Roos '198 arguments constituted inequitable conduct because it knew that those arguments were directly contrary to the Orrick opinion and yet it failed to adequately disclose the Orrick opinion to the examiner. 37 C.F.R. § 1.56(b)(i)-(ii). The rules require that ArthroCare provide enough information "to clearly inform the Office of the nature of these issues so that the Office can intelligently evaluate the need for asking for further materials in the litigation." MPEP 2001.06(c). Providing a misleading, over-simplified description of the Orrick opinion certainly does not meet this requirement. *See also* 37 C.F.R. § 1.98(a)(2)(iv) (an IDS must include a legible copy of "all other information or that portion which caused it to be listed" in the IDS); *Critikon, Inc.*, 120 F.3d at 1258-59.

[7] As more fully discussed in Smith & Nephew's Motion for Judgment as a Matter of Law, ArthroCare never rebutted Smith & Nephew's clear and convincing evidence that the Roos '198 patent discloses electrically conductive fluid. (*See* D.I. 459).

In *Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.*, 53 U.S.P.Q.2d 1302 (N.D. Ill. 1999), the court rejected a "no-materiality" argument substantially identical to that put forth by ArthroCare:[8]

> Plaintiffs argued that the 'substance' of the order [denying the preliminary injunction] was fully disclosed, since each of the prior art references cited therein was before the examiner. This argument ignores the significance of the order, which goes far beyond its recitations of prior art; ***its significance lies in [the judge's] own determination that the recited prior art was sufficient to overcome the statutory presumption of validity. This determination is material in its own right, and was never submitted or disclosed to the examiner.***

Id. at 1331 (emphasis added). Likewise, here, the Orrick opinion "is material in its own right." Thus, no matter what the jury verdict and the examiner's allowance indicates to ArthroCare, the legal requirement was for ArthroCare to disclose to the examiner Judge Orrick's detailed findings that the Roos '198 patent does indeed disclose electrically conductive fluid.[9]

ArthroCare also argues the Orrick opinion is immaterial because Smith & Nephew did not assert the Roos '198 patent or the Elsässer and Roos Article in its invalidity case against the '592 patent during trial. But Smith & Nephew's decision to streamline its case in view of the limited trial time does not take away from the materiality of the Orrick opinion or the actual disclosure of the Roos '198 patent or the Elsässer and Roos Article as invalidating art. As we pointed out in our Opening Brief, the Court is obliged to independently assess the materiality of these references, irrespective of the jury verdict. (D.I. 442 at 18-19).

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[8] The Federal Circuit affirmed the finding that the PI Order was material but overruled the overall inequitable conduct finding of the district court on other grounds. *Newell Window Furnishings, Inc. v. Spring Window Fashions Division, Inc.*, 15 Fed. Appx. 836, 839, 2001 WL 744460 (Fed. Cir. 2001) (non-precedential opinion).

[9] Astoundingly, ArthroCare continues to misrepresent what claim 1 of the Roos '198 patent discloses. In its Answering brief (D.I. 462 at 15), ArthroCare "quotes" claim 1 of the Roos '198 patent as "provide[s] electrical conductance." *Id.* It attempts to use this paraphrasing to support its bizarre position that all liquids conduct electricity and that claim 1 therefore discloses non-conductive liquid. ArthroCare's selective quotation is very different from the actual language "liquid to provide electrical conductance between said electrodes." (DTX-11 at col. 7, lines 61-62). If the whole purpose of adding a liquid is to "provide electrical conductance," how can it possibly be consistent with the disclosure being of a non-conductive liquid?

Moreover, the materiality of the Roos '198 patent and the Elsässer and Roos Article has been reaffirmed by the PTO. In granting reexamination of the '592 patent, the PTO explained:

> As pointed out on page 2 of the request, Roos '198 ***discloses an electrically conducting fluid in claim 1. The teaching of an electrically conducting fluid by Roos '198 was not considered in the prosecution of the application***, which became the Eggers et al. patent. ... Accordingly Roos '198 raises a substantial new question of patentability ... which question has not been decided in a previous examination of the Eggers et al. patent.
>
> * * *
>
> Furthermore, as pointed out on page 5 of the request the Elsässer and Roos article discloses current flowing from the cutting loop to the neutral electrode through the adjacent tissue to be cut and the irrigation liquid. The teaching of the irrigation liquid being conductive by the Elsässer and Roos article was not considered in the prosecution of the application, which became the Eggers et al. patent.
>
> * * *
>
> In addition, the examiner finds that the Roos '198 prior art, which was already considered by the examiner in the prosecution of the Eggers et al. patent, is presented in a new light with respect to the washing fluid being conductive. ... ***This teaching was not pointed out in the*** [prosecution of the] ***Eggers et al. patent, and apparently not recognized by the examiner.***

(Walter Dec. Ex. C at 2-4) (emphasis added).

Finally, ArthroCare argues that government officials are presumed to have properly done their job. (D.I. 462 at 14). This argument is unavailing. First, the Orrick opinion was not properly in front of the PTO. Thus, the examiner could not have properly performed his duty because he had no idea that Judge Orrick had found that the Roos '198 patent disclosed electrically conductive fluid. *See* MPEP 2001.06(c). This was not the examiner's fault, but rather the result of ArthroCare's intentional decision to characterize the opinion in a misleading way. Second, this presumption is not absolute. *See American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359-1360 (Fed. Cir. 1984) (noting that parties may overcome deference granted to examiners who are presumed to have done their jobs); *see also Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1184 (Fed. Cir. 1995) (noting that party may offer proof to counter assumption that examiner considered references). If the presumption were absolute, no patent could ever be found invalid or unenforceable through litigation or reexamination.

C. ArthroCare's Inequitable C nduct During the '882 Prosecution

ArthroCare committed inequitable conduct in the prosecution of the '882 patent by making affirmative misrepresentations to the PTO when it applied for a Certificate of Correction and failed to explain that the "corrections" would broaden the claims. (D.I. 442 at 28-29). In its Opposition, ArthroCare has raised several excuses and arguments. Again, none have merit.

1. Smith & Nephew's Allegation of Inequitable Conduct with Respect to the '882 Patent is Proper

Smith & Nephew's inequitable conduct defense related to the prosecution of the '882 patent arises out of evidence brought out at trial. Federal Rule of Civil Procedure 15(b) specifically allows the pleadings to be freely amended "as may be necessary to cause them to conform to the evidence and ... may be made upon motion of any party at any time, even after judgment." Fed. R. Civ. P. 15(b). The Rule further allows the Court to "grant a continuance to enable the objecting party to meet such evidence." *Id.*

As explained more fully in Smith & Nephew's Opening Brief, the testimony at trial, particularly of Mr. Raffle and Dr. Goldberg, provide the facts underlying this defense. The testimony included admissions directly contrary to arguments that ArthroCare had been making throughout the case. At trial, ArthroCare had ample opportunity to examine these witnesses on any testimony Smith & Nephew obtained from them. Further, ArthroCare had the opportunity to try to rebut Smith & Nephew's arguments made in its Opening Brief. Moreover, there was no "last-minute production of evidence" as in *ATD Corp.*, 159 F.3d at 550-51. Instead, there were only last-minute concessions at trial from ArthroCare's witnesses. Thus, ArthroCare can show no prejudice to it by allowing this defense. The Court should consider the defense and enter judgment that the '882 patent is unenforceable.

2. ArthroCare's Intent to Deceive the PTO

ArthroCare argues that Mr. Raffle's good faith is somehow proven by the fact that ArthroCare asserted claim 26 of the '882 patent in its lawsuit against Ethicon, without correcting the "three electrode" problem. (D.I. 462 at 35). ArthroCare further argues that "if Mr. Raffle were aware of the 'three electrode' problem in claim 52, he surely would have corrected it to

cover Ethicon's 'two electrode' products." This argument is misleading to the point of bordering on a violation of the ethical rules.[10]

There is absolutely no evidence in this case about claim 26 of the '882 patent being asserted against any "two electrode" products of Ethicon. Instead, the evidence is to the contrary. Based on documents produced to Smith & Nephew in discovery, claim 26 of the '882 patent was asserted against Ethicon products that had three separate electrodes.

ArthroCare's infringement allegations in the *Ethicon* case were raised in a preliminary injunction motion filed shortly after ArthroCare filed its lawsuit against Ethicon. The motion was supported by the declaration of ArthroCare's expert, William R. Dubrul, who explained the basis for ArthroCare's infringement contentions. With respect to claim 26 of the '882 patent, Mr. Dubrul explained:

> As demonstrated in Exhibit I, the use of [Ethicon's] VAPR Systems involving the performance of each step recited in Claim 26. The VAPR Product Literature shows that the use of VAPR System involves providing an *active electrode* and a *return electrode* electrically coupled to a high frequency source, positioning the *electrode terminal* in close proximity to the target site in the presence of an electrically conductive fluid...

(Walter Dec. Ex. E) (emphasis added).

Thus, ArthroCare's supposed proof of Mr. Raffle's good faith vanishes. He did not seek a certificate of correction for claim 26 of the '882 patent because ArthroCare did not need one for its suit against Ethicon.

3. Mr. Raffle's Omissions and Misrepresentations are Material

Mr. Raffle's omissions and misrepresentations are material because they refute and contradict the arguments of patentability made by ArthroCare. 37 C.F.R. § 1.56(b)(i)-(ii).

ArthroCare never disputes that the statements made by Mr. Raffle were false, and that the changes made by the Certificate of Correction broaden the scope of the claims. In fact, its expert, Dr. Goldberg, admitted that the Certificate of Correction broadened the scope of claim 1 of the '882 patent. (Tr. 1109-11, D.I. 415). ArthroCare only argues that this does not matter because

[10] ABA Model Rules of Prof'l Conduct R. 3.3(a)(1) requires that "a lawyer shall not knowingly...(3) offer evidence that the lawyer knows to be false."

the jury found the changes corrected typographical errors.[11] However, this argument once again confuses the legal standards that apply to patent litigation in the courts and those that apply to patent prosecution in the PTO. Mr. Raffle had a duty to tell the examiner that the changes broadened the scope of claim 1 because this information contradicts the Reasons for Allowance, which ArthroCare accepted. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999) (holding that failure to respond to an examiner's reason for allowance functioned as a disavowal of a different interpretation of the claim). Even though the examiner checked the box on the form saying that the changes would not materially affect the scope of the claims, "there is, of course, the possibility that mistakes were made or important information overlooked. Examiners have a lot of work to do and no process is perfect." (Tr. at 95, D.I. 409). Since it is now undisputed that the Certificate did broaden claims, there can be no dispute that the examiner made a mistake when he checked the box indicating that the changes would not materially affect the scope of the claims.

Similarly, ArthroCare argues that changing "active electrode" to "electrode terminal" cannot be material because these terms are used interchangeably. (D.I. 462 at 34). But any evidence of supposed interchangeability at trial is irrelevant to inequitable conduct during the prosecution of the '882 patent. Moreover, whether or not they are interchangeable terms, it is undisputed that the change reduced the number of electrodes that were required by the claim, and Mr. Raffle knew that when he sought those changes.

D. ArthroCare's Inequitable Conduct During the '536 Reexamination

ArthroCare committed inequitable conduct in connection with the reexamination of the '536 patent by failing to disclose Smith & Nephew's summary judgment briefs, experts' reports and the Roos Declaration, which all relate to the issues of invalidity. (D. I. 442 at 21-22). In its opposition, ArthroCare has raised several excuses and arguments. As we show below, none of these have merit either.

[11] However, as shown in Smith & Nephew's Motion for Judgment as a Matter of Law, the jury's verdict that the Certificate of Correction was valid was wrong as a matter of law because the changes were not of a typographical nature. (D.I. 459 at 14-15).

1. Smith & Nephew Has Properly Alleged New Inequitable Conduct D fenses

Once again, ArthroCare improperly attempts to break Smith & Nephew's inequitable conduct defense relating to the '536 patent into multiple separate defenses based on various discrete facts, and argues that the Court should consider only some of those separate pieces. (D.I. 462 at 5). But Smith & Nephew's defense is based upon ArthroCare's continued failure to provide material information from the present litigation to the PTO, despite the fact that it was contrary to the arguments ArthroCare was making.

Smith & Nephew should not be limited to the specific allegations in its pleadings for its inequitable conduct defense. *Agere Systems Guardian Corp.*, 190 F. Supp. 2d at 734. A pleading is not intended to be a summary judgment brief. Further, Smith & Nephew is not relying on any "last-minute production of evidence" (*cf. ATD Corp.*, 159 F.3d at 550-51), and ArthroCare has failed to prove that it would suffer any unfair surprise, disadvantage or prejudice.

Finally, ArthroCare argues that Smith & Nephew should not be allowed to rely on its experts' reports or the Roos Declaration because they are not in the record of the jury trial. However, they are properly within the scope of Smith & Nephew's pleading of its inequitable conduct defense, as discussed above. Moreover, the fact that ArthroCare never submitted those documents is clearly in the jury trial record:

> Q. Finally, with respect to material that you did and did not submit to the Patent Office in connection with the re-exam, it is true, isn't it, that you did not submit Smith & Nephew's arguments about validity as set forth in its expert reports, Dr. Taylor's expert report, or in its summary judgment motions; right?
>
> MR. BLUMENFELD: Objection, your Honor.
>
> THE WITNESS: That's correct. We did not submit the expert reports in [sic: or] the summary judgment motions.

(Tr. at 1542, D.I. 417). In fact, this testimony was introduced on re-direct, after ArthroCare attempted to establish that Mr. Raffle had submitted Smith & Nephew's validity contentions to the PTO. (Tr. at 1535-36, D.I. 417). Moreover, since ArthroCare never disputes that the experts' reports and the Roos Declaration are inconsistent with its arguments to the PTO, materiality is established through that fact alone.

2. Evidence f Intent t Deceive the PTO

It is undisputed that ArthroCare did not provide the examiner with copies of Smith & Nephew's summary judgment briefs, its experts' reports or the Roos Declaration, each of which contradict ArthroCare's arguments. (*See supra*). It is from these facts that intent to deceive can be inferred. *Bristol-Myers Squibb*, 326 F.3d at 1240 ("the determination that Mr. Pilard knew of the significance of the [withheld information] in combination with the finding that he knew of the duty to disclose is sufficient to establish intent"). Further, ArthroCare has not shown any evidence of subjective good faith to overcome the high materiality of the Smith & Nephew litigation documents, as described below. *Critikon, Inc.*, 120 F.3d at 1257.

3. The Undisclosed Litigation Documents are Highly Material

The litigation documents that ArthroCare decided not to disclose to the PTO are highly material. Information is material when it is inconsistent with a position the applicant takes in opposing an argument of unpatentability. 37 C.F.R. § 1.56(b)(i). ArthroCare never disputes that Smith & Nephew's experts' reports and summary judgment briefs and the Roos Declaration are inconsistent with its positions taken in opposing the examiner's rejection based on the Roos '198 patent.

The materiality of these documents was recently confirmed by the PTO when it granted Smith & Nephew's requests for reexamination. (*See* Walter Dec. Exs. A, B and C). The reexamination requests included virtually all of the arguments made in Smith & Nephew's summary judgment briefs and experts' reports. In granting the reexamination, the examiner noted:

> Requestor's argument concerning the interpretation of the limitation of claim 1 of Roos ('198) (Exhibit A) of liquid providing electrical conductance between electrodes presents the old art in a new light. The declaration of Eberhard Roos (Exhibit 1) also presents old art Roos ('198) and the Elsasser and Roos article in a new light.

(Walter Dec. Ex. A at 3). Thus, the PTO has found a substantial new question of patentability.

ArthroCare also argues that the Roos Declaration is immaterial as a matter of law. However, once again, ArthroCare is confusing what is relevant or admissible in litigation and

rests on the inventor, on each attorney or agent who prepares or prosecutes an application and on every other individual who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee, or with anyone to whom there is an obligation to assign the application."). This is particularly so where it is clear that ArthroCare's outside attorneys have long been involved in prosecution of ArthroCare's patents. For example, Smith & Nephew produced documents during discovery in this case to litigation counsel who then had ArthroCare submit them to the PTO (PTX 7 at 282-289). There is no reason that litigation counsel could not have also turned over the Roos Declaration and Smith & Nephew's experts' reports and summary judgment briefs for submission to the PTO. In fact, Mr. Raffle testified during his deposition that Mr. Bobrow, ArthroCare's lead litigation counsel, was involved in preparing the list of material to submit to the PTO from the Ethicon case in the course of the '592 prosecution. (Walter Dec. Ex. F, at 261-62). Certainly Mr. Bobrow knew about ArthroCare's duty of disclosure in this case as well.

Therefore, Smith & Nephew's summary judgment briefs, its experts' reports and the Roos Declaration are all material information that was not disclosed to the PTO, and ArthroCare's intent to deceive has not been rebutted by any showing of subjective good faith, proving that ArthroCare committed inequitable conduct during prosecution of the '536 reexamination. *Bristol-Myers-Squibb*, 326 F.3d at 1240.

IV. CONCLUSION

For all of the foregoing reasons, as well as the reasons set forth in Smith & Nephew's Opening Brief, Smith & Nephew respectfully requests that the '536, '882, and '592 patents be held unenforceable due to inequitable conduct by ArthroCare in obtaining each of the patents.

Dated: July 24, 2003

FISH & RICHARDSON P.C.

By: _____

William J. Marsden, Jr. (#2247)
Keith A. Walter, Jr. (#4157)
919 N. Market Street, Suite 1100
Wilmington, DE 19899-1114
Telephone: (302) 652-5070

Kurtis D. MacFerrin
Karen I. Boyd
500 Arguello Street, Suite 500
Redwood City, CA 94063
Telephone: (650) 839-5070

Mark J. Hebert
Thomas M. Johnston
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070

Attorneys for Defendant
SMITH & NEPHEW, INC.

CERTIFICATE OF SERVICE

I hereby certify that on this 24th day of July, 2003, a true and correct copy of SMITH & NEPHEW'S REPLY BRIEF IN SUPPORT OF ITS INEQUITABLE CONDUCT CASE was caused to be served on the attorneys of record at the following addresses as indicated:

BY HAND DELIVERY
Jack B. Blumenfeld, Esq.
Morris, Nichols, Arsht & Tunnell
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899-1347

Attorneys for Plaintiff
Arthrocare Corporation

BY FEDERAL EXPRESS
Matthew D. Powers
Jared Bobrow
Perry Clark
WEIL, GOTSHAL & MANGES LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065 –1175

Attorneys for Plaintiff
ArthroCare Corporation

BY HAND DELIVERY
Steven J. Balick, Esquire
Ashby & Geddes
222 Delaware Avenue
Wilmington, DE 19801

Attorneys for Counterclaim Defendants,
Ethicon, Inc.

William J. Marsden, Jr.

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